Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20544

In the Matter of Skype Communication's Petition to Apply *Carterfone* Attachment Regulations to the Wireless Industry	RM – 11361

COMMENTS OF AT&T INC. OPPOSING SKYPE COMMUNICATION'S PETITION TO APPLY *CARTERFONE* ATTACHMENT REGULATIONS TO THE WIRELESS INDUSTRY

Michael P. Goggin
Jack Zinman
Gary L. Phillips
Paul K. Mancini
AT&T INC.
1120 20th Street, N.W.
Washington, D.C. 20036
(202) 457-3053

Colin S. Stretch
Kelly P. Dunbar
KELLOGG, HUBER, HANSEN,
TODD, EVANS & FIGEL, P.L.L.C.
Sumner Square
1615 M Street, N.W., Suite 400
Washington, D.C. 20036
(202) 326-7900

Counsel for AT&T Inc.

April 30, 2007

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY

> [W]ireless is the poster child for competition. There are now more than 161 million wireless subscribers in this country. There are over 205,000 jobs in the wireless industry. The industry has invested more than $ 146 billion.[1]

That was nearly three years ago. Since then, subscribership has continued to escalate (to 233 million),[2] usage has increased 27%,[3] capital investment has surged, jobs are up,[4] and rates have continued to decline. Equally important, the industry has made an enormous investment in the move to third-generation ("3G") networks, betting billions of dollars that customers will use their handsets not just to make voice calls, but also for a host of new and innovative services optimized for the mobile environment, including email, text-messaging, web-surfing, music and video downloading, and even social networking. And customers are responding. Although 3G wireless networks remain in their infancy – and carriers and applications developers are only just beginning to explore the broadband services that will most appeal in the mobile context –

---

[1] Kevin J. Martin, Commissioner, FCC, *Wireless and Broadband: Trends and Challenges*, Presentation for Dow Lohnes-Comm Daily Speaker Series, Washington, DC, 2004 FCC LEXIS 5871, at *3 (Oct. 15, 2004); *see also* Report and Order, *2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services*, WT Docket No. 01-14, FCC 01-328 (rel. Dec. 18, 2001) ("*2000 Biennial Report*") (Dissenting Statement of Commissioner Michael J. Copps) ("The wireless industry . . . is a great success story. CMRS providers give customers a wide variety of services and technologies."), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-328A1.pdf.

[2] CTIA, *Background on CTIA's Semi-Annual Wireless Industry Survey* at 2, *at* http://files.ctia.org/pdf/CTIA_Survey_Year_End_2006_Graphics.pdf (year-end 2006 industry subscriber total).

[3] Eleventh Report, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, 21 FCC Rcd 10947, App. A, Table 10 (2006) (minutes of use per subscriber per month grew from 584 at year-end 2004 to 740 at year-end 2005, an increase of nearly 27%) ("*Eleventh Competition Report*").

[4] CTIA, *Background on CTIA's Semi-Annual Wireless Industry Survey* at 2, *at* http://files.ctia.org/pdf/CTIA_Survey_Year_End_2006_Graphics.pdf (increase from 226,000 employees as of year-end 2004 to nearly 254,000 as of year-end 2006).

wireless broadband has already demonstrated its enormous potential, with subscribership exploding seven-fold to more than 3 million in the last six months of 2005 alone.[5]

Against this backdrop of competition, continued investment, and enormous consumer welfare, Skype asks this Commission to intervene and drastically interfere with the mechanisms through which carriers authorize the handsets and applications that work on their networks. Describing the wireless industry as "mature," Skype complains that wireless providers restrict the handsets and applications that will function on their networks for competitive reasons, and it asks the Commission to announce a broad mandate that consumers have the right to attach *any* handset, and to run *any* application, on *any* wireless network, and it further asks the Commission to investigate the supposedly anti-competitive practices it claims to have identified.

Skype's petition rests, foremost, on a profound misconception of the proper role of this Commission. The Commission has long-recognized that, in the words of Chairman Martin, "[m]arket forces are the best method of delivering choice, innovation, and affordability to consumers," and the Commission should only "step in and take action" where there are "market failures."[6] Far from exhibiting market failure, the wireless industry – and, in particular, the 3G network capabilities on which Skype's petition focuses – demonstrates the robust growth, investment, and variation in service offerings that are the hallmarks of competition. Indeed, the Commission deserves much of the credit for that, having spent the better part of the last two decades moving to free the wireless industry from regulation, and the market has responded

[5] S. Flannery, *et al.*, Morgan Stanley, *Speed is Key as Broadband Market Matures* at 10, Exhs. 15 & 16 (Jan. 26, 2007) (showing net addition of 2.746 million wireless broadband subscribers in the second half of 2005, for a year-end 2005 total of 3.126 million subscribers).

[6] FCC News Release, *Press Statement of Commissioner Kevin J. Martin on the Commission's Decision on Verizon's Petition for Permanent Forbearance from Wireless Local Number Portability Rules* (July 16, 2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-224368A4.pdf.

accordingly. It would be a giant step backwards if the Commission were to now substitute its judgment for that of the market and impose the one-size-fits-all regulatory mandate that Skype proposes, with all the interventionist regulation that such a mandate would necessarily entail.

Skype's petition is also wrong on the facts. The wireless industry is not "mature." On the contrary, the 3G networks that are the primary focus of Skype's petition are only just now being deployed, and the services and applications that will run over those networks are only just now being developed. Regulatory intervention at this point, with the market in its infancy, could have disastrous long-term effects, distorting investment and stifling the ongoing innovation and experimentation that is critical in this early stage of broadband wireless deployment.

Nor is Skype correct that carriers disable handset features or prohibit certain applications for competitive purposes. Indeed, Skype's descriptions of such events are in each case either mistaken or, at a minimum, incomplete to the point of being misleading. Thus, for example, whereas Skype complains that, for competitive reasons, AT&T[7] "crippled" a Nokia handset so as to disable WiFi, it ignores the central facts – which are apparent from visiting any Cingular Wireless store – that AT&T sells several handsets with WiFi capability, and that the Nokia handset Skype identifies was designed for a market segment that would not need and thus would not want to pay for WiFi. Likewise, while Skype points to one carrier that at one point purportedly disabled Bluetooth functionality so as to discourage users from directly transferring music and videos between handsets and personal computers, it declines to note that AT&T, as part of its attempt to differentiate itself in the marketplace, affirmatively encourages such "sideloading" and thus enables Bluetooth functionality on many of the handsets it sells. Indeed, in case after case, Skype identifies an isolated practice that it claims has been adopted by one

[7] As used herein, "AT&T" refers to AT&T Mobility LLC, which formerly did business as Cingular Wireless LLC.

carrier and falsely characterizes it as a practice adopted across the industry. Such anecdotal (and incomplete) accounts are no substitute for sound analysis. The truth is that, with respect to both handsets and the applications that can access network resources, as would be expected in a dynamic and highly competitive industry, different carriers have adopted different policies, with the objective of providing high-quality service and protecting the network from harm.

Finally, Skype's petition is wrong on the law. Skype's central request is that the Commission "declare" that *Carterfone*[8] – the Commission's 1968 decision that invalidated as overbroad a Bell System tariff provision that prohibited all foreign attachments to the wireline network – "applies" to the wireless industry. But *Carterfone* has no application in this context. The Commission adopted the principle of *Carterfone* at a time when the Bell System dominated landline telecommunications as well as, through vertical integration, the adjacent market for telephone equipment. The contrast with today's wireless industry could not be more clear: the wireless industry is not vertically integrated and it is competitive from top to bottom, with multiple carriers and many handset manufacturers from which consumers can choose. It makes no sense to apply a regulatory regime designed to spur competition and innovation in a monopoly environment to a competitive industry that already bears all the hallmarks of competition and innovation. And even if Skype could demonstrate some level of market failure in the wireless industry – which it cannot – the intrusive regulation it seeks would still be unwarranted. Because of the inherent difficulties in designing regulations for a dynamic and emerging market and the inevitable costs of such regulation, any regulatory "fix" of a perceived market imperfection would almost certainly cause more harm to consumers than the alleged imperfection itself.

[8] Decision, *Use of the Carterfone Device in Message Toll Telephone Service*, 13 F.C.C.2d 420 (1968) ("*Carterfone*").

* * *

These comments are organized as follows. In the Background section, AT&T describes the competitive state of the wireless and broadband industries, demonstrating in particular the intensity of the competition to deploy the 3G network capability that is the focus of Skype's petition. In Section I, AT&T demonstrates why *Carterfone* and its progeny have no application to today's competitive wireless industry, explaining that the industry is profoundly different from the wireline industry at the time of *Carterfone* and that the goal that *Carterfone* and its progeny ultimately achieved – competition and innovation among equipment manufacturers – has *already* been reached in the wireless context. Section II then explains why Skype's call to initiate a rulemaking to identify the supposedly anti-consumer practices it has identified is unfounded, and why the anecdotal and incomplete evidence on which Skype relies fails to support its call for sweeping regulatory intervention in the wireless industry.

BACKGROUND

A. The Wireless Industry Is Characterized by Intense Competition that Has Enhanced Consumer Welfare

The wireless industry is fiercely competitive. Consumers today can generally choose from among four national wireless carriers,[9] one or two regional carriers,[10] and a wide variety of mobile virtual network operators ("MVNOs") that resell service together with unique content and devices.[11] The Commission recently found that 98% of the U.S. population lives in counties

[9] *Eleventh Competition Report* ¶ 25 (listing Sprint Nextel, Verizon Wireless, T-Mobile, and AT&T as four nationwide mobile telephone operators).

[10] *See id.* (finding that, "[i]n addition to the nationwide operators, there are a number of large regional players, including Alltel Corp. . . . , United States Cellular Corp. . . . , and Dobson Communications") (footnotes omitted).

[11] *See id.* ¶¶ 27-28 (describing competition from MVNOs and finding that "resale competition has been growing"); *see also* Scott Ellison, IDC, *U.S. MVNO Subscriber and Revenue 2006-2010 Forecast* at 1 (June 2006) (finding that "[t]he U.S. . . . [MVNO] market is

with three or more wireless operators offering mobile wireless services; that 51% of the population lives in counties with five or more mobile operators; and that 18% of the population lives in counties with six or more mobile operators.[12] Overall, 90% of the public has a choice of at least four wireless providers.[13]

This robust evidence of consumer choice has fueled and is accompanied by equally impressive subscribership growth. Between 1985 and 2005, the compound annual growth rate of wireless subscribership in the United States was nearly *38%*.[14] "In the last three years alone, the total mobile telephone subscriber base has increased 50 percent."[15] These first-time subscribers, coupled with the approximately 5 million subscribers who switch wireless carriers each year, ensure that carriers will continue to fight hammer-and-tong in the marketplace, and that "the market [will] continue[ ] to behave and perform in a competitive manner."[16]

As wireless subscribership has increased, so too has usage. "Minutes of use among the leading national wireless providers climbed 20-fold between 1999 and 2006,"[17] with more recent

---

one of most active areas in the U.S. wireless market, with 30+ announced MVNOs intending to enter the market").

[12] *Eleventh Competition Report* ¶ 41.

[13] Kevin J. Martin, Chairman, FCC, *Written Statement Before the Senate Committee on Commerce, Science and Transportation* at 3 (Sept. 12, 2006), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-267390A1.pdf.

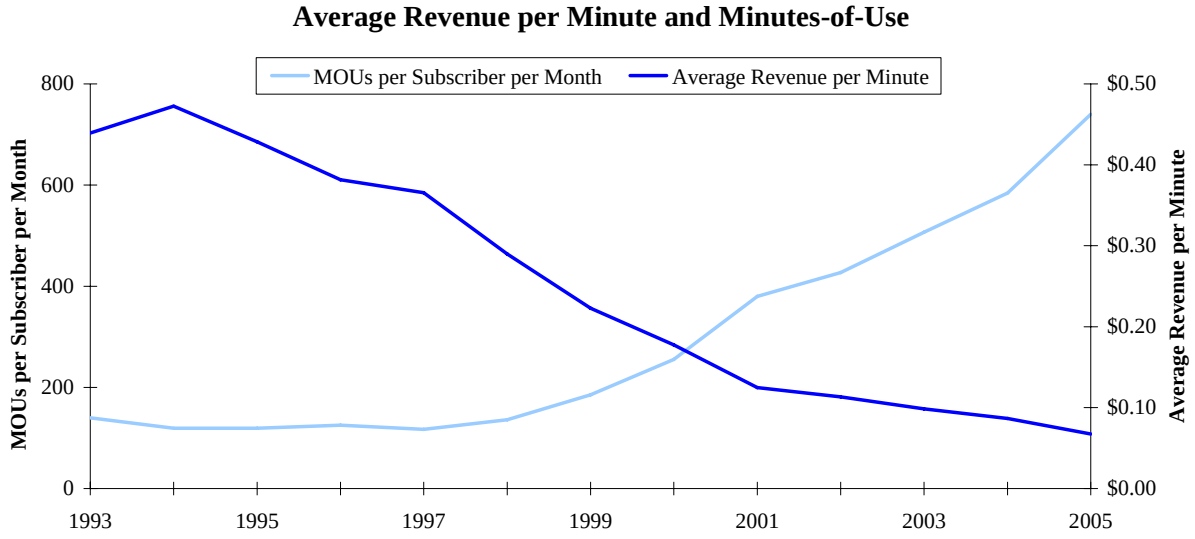
[14] *Eleventh Competition Report*, App. A, Table 1.

[15] *Id.* ¶ 158.

[16] *Id.* ¶ 2; *see also* Order on Remand, *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 20 FCC Rcd 2533, ¶ 36 n.106 (2005) ("The Commission repeatedly has found the mobile wireless service market to be competitive.").

[17] S. Flannery, *et al.*, Morgan Stanley, *4Q06 Preview/2007 Outlook: Is Telecom Back for Good?* at 32 (Jan. 24, 2007).

years showing especially steep increases.[18] Moreover, the United States leads the world in average minutes of use per subscriber, and wireless calls are significantly less expensive in the United States than in Western Europe or Japan.[19] By any conceivable metric, the wireless industry exhibits the increasing output and declining prices that are the hallmarks of a robustly competitive industry.[20]



The competition among carriers to win new customers, and to retain existing ones, has yielded enormous consumer welfare benefits. As evidence of that, wireless rates have been steadily falling. Between 1994 and 2005, wireless revenue-per-minute fell a staggering 86%,

[18] *See Eleventh Competition Report* ¶ 169 ("Average minutes-of-use per subscriber per month . . . jumped again in 2005, to 820 minutes, or more than 13 hours of use, for the average subscriber of a nationwide operator in the last quarter of the year. This is an increase of 110 MOUs, or almost two hours of additional use, from a year earlier.").

[19] *See id.* ¶ 189.

[20] *See* Kevin J. Martin, Chairman, FCC, *Regulation, Competition, Telecommunications and Content*, Remarks Before the Portuguese Association for Communications Advancement, Lisbon, Portugal, 2006 FCC LEXIS 6081, at *6 (Nov. 16, 2006) ("Wireless competition has been fierce and has resulted in billions of dollars in infrastructure investment as well as in significant price decreases for consumers.").

including a 22% plunge in 2005 alone.[21] According to one estimate, as of 2004, wireless carriers had created $900 billion in consumer welfare benefits.[22]

These trends – and the consumer welfare that flows from them – are a direct result of the deregulatory environment for the wireless industry established by the Commission and Congress. The Commission since the early 1990s has moved aggressively to deregulate the wireless industry, licensing multiple carriers in each market,[23] forbearing from rules limiting the spectrum a provider can own in each market,[24] and agreeing to phase out the requirement to maintain analog network capabilities in light of the competitive state of the industry.[25] And Congress has done its part, by preempting state regulation of wireless rates and by eliminating the restriction on Bell companies' provisioning of wireless long distance.[26] In the wake of these and other deregulatory steps – which enabled the emergence of multiple robust, national networks – the

---

[21] *Eleventh Competition Report* ¶ 154; *see also id.* ¶ 153 ("From 2004 to 2005, the annual Cellular CPI decreased by about 1.8 percent while the overall CPI increased by 3.4 percent. The Cellular CPI has declined 35 percent since December 1997, when BLS began tracking it.").

[22] *See* Thomas W. Hazlett & Matthew L. Spitzer, *Advanced Wireless Services, Spectrum Sharing, and the Economics of an "Interference Temperature"*, attached to Comments of Thomas Hazlett & Matthew Spitzer at 33, ET Docket No. 03-237 (FCC filed Apr. 5, 2004).

[23] *See* William C. Beckwith, *Cutting the Cord: Removing the CMRS Spectrum Cap to Promote Wireless-Landline Convergence and Wireless Alternatives in the Local Loop*, 7 CommLaw Conspectus 369, 371 n.19 (1999) (citing Report of Council of Economic Advisors showing "full-fledged competition" in wireless services as the Commission began to "creat[e] new wireless licensees in U.S. markets").

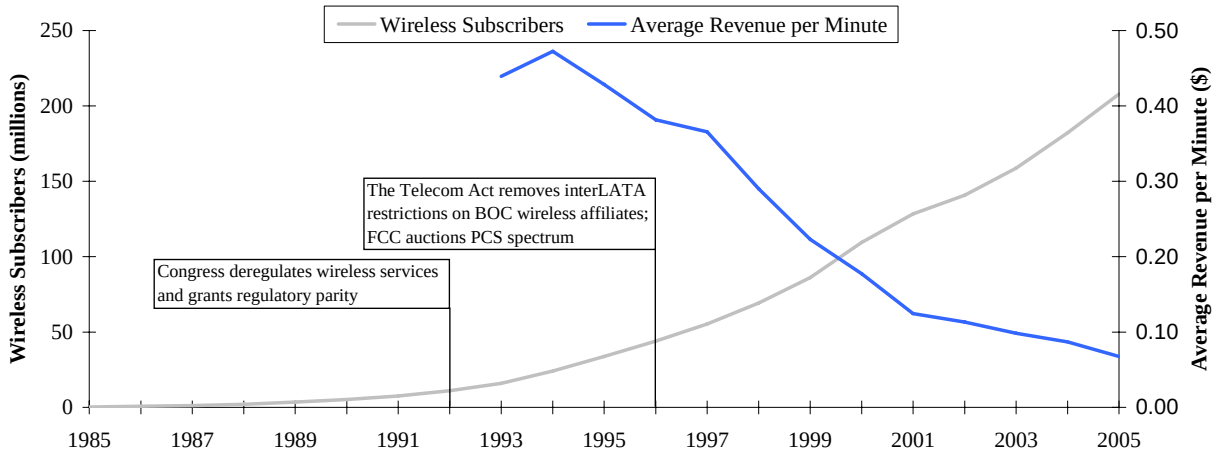
[24] *See 2000 Biennial Report* ¶ 47.

[25] *See* Report and Order, *Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and other Commercial Mobile Radio Services*, 17 FCC Rcd 18401, ¶ 8 (2002) (modifying 47 C.F.R. §§ 22.901 and 22.933 (2000) in light of the "competitive state of mobile telephony").

[26] *See* 47 U.S.C. § 332(c)(3)(A) ("no State or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service"); *id.* § 271(b)(3), (g)(3) (permitting Bell companies to provide "incidental interLATA services," which include "commercial mobile services").

industry and the consumers that it serves have thrived.

The FCC's Deregulatory Policy Has Been Successful



Competition in the wireless industry has also yielded a remarkable spate of innovation. The deployment of digital networks – and, in particular, of competing digital standards to run on those networks – has enabled carriers to compete not just on price and service quality, but also on the basis of services. As the Commission has explained, the competing digital standards used in the industry – GSM, CDMA, UMTS, and TDMA – result in "greater product variety and greater differentiation of services."[27]

Indeed, largely as a result of the variety of technologies through which carriers deliver services, and in an attempt to differentiate their services, wireless carriers today have adopted different basic approaches to designing and marketing their networks and services. The result is a variety of choices for consumers in selecting a wireless service. Broadly speaking, AT&T has aimed to differentiate itself by providing subscribers the most advanced handsets and innovative services, coupled with high-quality service; Verizon Wireless, for its part, has striven to provide

[27] *Eleventh Competition Report* ¶ 103; *see also id.* ¶ 3 ("competitive pressure continues to drive carriers to introduce innovative pricing plans and service offerings, and to match the pricing and service innovations introduced by rival carriers.").

a high-quality network and advanced broadband capabilities; T-Mobile, in turn, attempts to provide low-cost services for price-sensitive subscribers; and Sprint has taken the lead in providing buckets of minutes and reaching agreements with MVNOs to combine resold service with handsets, content, and applications.[28] As further evidence of the basic differences among carriers, Verizon Wireless and Sprint have chosen a technology (CDMA) that is not amenable to international roaming, whereas AT&T and T-Mobile have chosen a technology (GSM) that is more useful to that end.

Competition in the wireless industry extends not just to carriers and the services and service plans they offer: competition among wireless *handset* manufacturers is also vibrant. There is virtually no vertical integration between carriers and handset manufacturers in the industry today, and each carrier offers wireless handsets manufactured by a variety of manufacturers. The bulk of handsets are produced by more than 10 manufacturers, none of which has a market share of more than one-third.[29] Wireless carriers, moreover, offer consumers a range of handsets produced by a range of manufacturers, with a range of functionalities and applications. In the last quarter of 2006, for example, "handset availability went up across all the national wireless carriers."[30] AT&T added 8 handsets in that quarter alone.[31] Other wireless

---

[28] *See, e.g.*, J. Hodulik, *et al.*, UBS, *Is an Apple Wireless MVNO Coming? – Impact on U.S. Carriers* at 4 (Dec. 12, 2006) ("[Sprint] tends to be the service provider for subscribers that use a lot of minutes, but are less concerned with the quality of the network. In contrast, Verizon Wireless attracts subscribers concerned most of all with the quality of the network. They are often less concerned with handset selection. Cingular has typically had the best handsets – with the exclusive carrier of the RAZR at its launch setting the tone. Meanwhile, T-Mobile generally attracts the most price sensitive of the postpaid market.") ("*Apple Wireless MVNO*").

[29] *See* NPD Group Press Release, *The NPD Group: U.S. Mobile Phone Sales Reached $4.4 Billion in the First Half of 2006* (Aug. 15, 2006), *available at* http://wireless.npd.com/news081506.html.

[30] D. Barden, *et al.*, Bank of America, *Wireless Services & Handset Pricing Analysis* at 8 (Dec. 19, 2006).

carriers also added handsets during that time, with Verizon Wireless, T-Mobile, and Sprint adding 7, 3, and 2 handsets respectively.[32] The increase in handsets available to consumers in that single quarter was *21%*.[33]

Consumers have choices not just in *which* handsets they use, but also in *how* they purchase them. Handsets, particularly advanced handsets that offer innovative features, are expensive. To ensure that this expense does not deter customers who would otherwise subscribe to wireless service, many carriers offer handsets at deeply subsidized rates in exchange for a customer's agreement to a term commitment. These policies have driven penetration of wireless services and handsets.[34] To recover the cost subsidization of the handset and to ensure that consumers abide by their term commitments, many carriers that sell subsidized handsets "lock" their handsets for the duration of the customer's contract.

Carriers' policies with respect to locked handsets, however, are not uniform. Although Verizon Wireless, for example, takes steps to ensure that customers fulfill their service commitments, it apparently does not lock its handsets.[35] T-Mobile does lock handsets that it sells, but will unlock those handsets after 90 days of fulfilling a contract.[36] AT&T unlocks a handset upon a customer's request after the customer has fulfilled his or her term commitment or

---

[31] *See id.*

[32] *See id.*

[33] *See id.* at 11.

[34] *See* AT&T Decl. ¶¶ 15-16.

[35] *See In re Wireless Telephone Servs. Antitrust Litig.*, 385 F. Supp. 2d 403, 410 (S.D.N.Y. 2005) ("*Wireless Antitrust Litigation*") ("Verizon Wireless . . . contends that it does not lock handsets on the ground that its 'post-pay' handsets are set to a widely-known default equivalent to leaving a handset unlocked.") (footnote omitted).

[36] *See* Monia Alleven, *Lock Down*, Wireless Week (Jan. 15, 2007), *available at* http://www.wirelessweek.com/article.aspx?id=82022 (visited Apr. 24, 2007); *see also* T-Mobile, *Ask T-Mobile, at* http://search.t-mobile.com/inquiraapp/ui.jsp?ui_mode=question&question_box=unlock (visited Apr. 24, 2007).

contractual obligations if the handset supplier allows AT&T to do so and has provided AT&T with this capability.[37] In addition, consumers can purchase handsets without subsidies and without service plans from various wireless carriers themselves,[38] or they can purchase unlocked handsets directly from manufacturers, such as Motorola,[39] or from online vendors, such as CompUSA, which sells unlocked Motorola, Nokia, and Samsung handsets.[40] Indeed, a wide range of unlocked handsets are available for sale on the website of Skype's owner, eBay.

In addition, in light of the technical interdependence between the handset and the network and the need to manage efficiently shared spectrum, many wireless carriers encourage, and some require, the use of certified handsets. These certification policies are generally aimed at protecting the security, integrity, and efficiency of carriers' wireless networks, as well as ensuring that handsets used by customers are fully interoperable with those networks. Because of competition, carriers' practices with respect to handsets, like other aspects of their service offerings to consumers, are subject to market discipline: carriers that adopt anti-consumer practices will quickly face lost sales.

---

[37] *See* AT&T Decl. ¶ 17; *see also infra* pp. 56-58.

[38] *See, e.g.*, T-Mobile, *My Cart*, *at* http://www.t-mobile.com/shop/cart/default.aspx (visited Apr. 11, 2007) (noting that if customers want "[t]o purchase equipment only (without a rate plan) [they should] visit [their] local T-Mobile Retail Store"); Sprint, *KATANA by Sanyo (Blue) Selected*, http://www1.sprintpcs.com/explore/PhonesAccessories/PhoneConfirmation.jsp?ADD_CART_ITEM%3C%3Esku_id=1757081&ADD_CART_ITEM%3C%3Eprd_id=1757079&ADD_CART_ITEM%3C%3Equantity=1&GET_SKU_CODE=sanyokatanab&FOLDER%3C%3Efolder_id=1476015&CURRENT_USER%3C%3EATR_SCID=ECOMM&CURRENT_USER%3C%3EATR_PCode=None&CURRENT_USER%3C%3EATR_cartState=group&bmForm=SprintPCSAddPhone&bmFormID=1176305941702&bmSubmit=addPhoneToCart&bmHash=4d16160363e1c21b9dff352bba0df5e6a94c6a30 (visited Apr. 24, 2007) (stating that to purchase the Katana with a service plan is $30 while the same handset without a plan is $250).

[39] *See* http://www.store.motorola.com/mot/en/US/adirect/motorola?cmd=catDisplayStyle&catKey=600681&promoID=108500&WT.mc_id=2007012202 (visited Apr. 24, 2007).

[40] *See* http://www.compusa.com/products/products.asp?N=200451&Ne= 200000 (visited Apr. 24, 2007).

B. The Fiercely Competitive Broadband Market and the Emergence of Wireless Broadband

Although the wireless industry is competitive across all services and segments, the competition to deploy emerging 3G networks capable of delivering wireless *broadband* service is especially fierce. Indeed, these mobile wireless broadband services, which are the focus of Skype's petition, are just one component of a wider broadband marketplace that is characterized by multiple forms of broadband transmission, a diverse group of market participants, and robust competition.[41]

The wireless broadband industry is nascent, but it holds enormous potential to provide consumers with an additional choice for accessing the Internet. 3G technology enables wireless carriers to deliver innovative, IP-based services – such as instant-messaging and limited web-surfing – in addition to voice and data over wireless handsets. The technology also delivers limited amounts of services – such as video and music – that promise to become more robust as they are optimized for the wireless environment.

Wireless carriers are investing huge amounts to provide these new advanced broadband services. Wireless carriers invested more than $20 billion in capital expenditures *each* year

[41] The Commission and the courts have repeatedly found that the broadband Internet access marketplace is robustly competitive. *See* Memorandum Opinion and Order, *Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c)*, 19 FCC Rcd 21496, ¶ 22 (2004) ("the preconditions for monopoly are not present" in broadband); Third Report and Order and Memorandum Opinion and Order, *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 15 FCC Rcd 11857, ¶¶ 18-19 (2000); Memorandum Opinion and Order, *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc. to AT&T Corp.*, 15 FCC Rcd 9816, ¶ 116 (2000); *accord United States Telecom Ass'n v. FCC*, 290 F.3d 415, 428 (D.C. Cir. 2002) (noting "robust competition . . . in the broadband market"); *EarthLink, Inc. v. FCC*, 462 F.3d 1, 11-12 (D.C. Cir. 2006) (noting that the court has "upheld in resounding terms" the FCC's findings that the broadband marketplace is a "competitive environment").

between 2001 and 2005, and that trend is expected to continue through 2007.[42] As explained in more detail below, AT&T is in the midst of deploying HSDPA/UMTS 3G technology throughout its network, and Verizon Wireless,[43] Sprint,[44] and T-Mobile[45] are also engaged in rapid expansions of their 3G network capabilities.

The growth opportunities presented by wireless broadband are enormous. Already, customers are responding – indeed, one analyst estimates growth in 3G subscribers of approximately 25% *per quarter*.[46] But that is only the beginning. Wireless carriers have strong incentives to develop innovative content and applications, and to partner with other providers that can develop broadband offerings – such as video, music, and web-related applications such

---

[42] *See* B. Bath, *et al.*, Lehman Brothers, *W3 Preview, 05 Wrls Net Add Fcst to 22M* at 7-8 & Fig. 10 (May 24, 2005).

[43] *See* Verizon Wireless Press Release, *Verizon Wireless Customers in Pittsburgh Get Faster New Wireless Broadband Network* (Mar. 6, 2007) (Verizon Wireless's "existing EV-DO network enables customers to access BroadbandAccess on their laptops, e-mail on their PDAs, and V CAST Video and Music on their wireless phones. The company's national wireless broadband network, the first in the nation, is already available to more than 200 million Americans in 242 major metropolitan areas and 180 major airports from coast to coast."), *available at* http://news.vzw.com/news/2007/03/pr2007-03-06.html.

[44] *See* Sprint Press Release, *Investor Quarterly Update – Fourth Quarter 2006 Results* (Feb. 28, 2007) (Sprint's "EVDO coverage . . . today reaches 209 million people and the deployment of Revision A technology . . . currently covers a population of 110 million"), *available at* http://www2.sprint.com/mr/news_dtl.do?id=15540.

[45] *See* T-Mobile Press Release, *T-Mobile USA Exceeds 25 Millions Customer Milestone and Reports Fourth Quarter and 2006 Results* (Mar. 1, 2007) (noting that T-Mobile "has started rolling out its UMTS network and has already deployed 3G equipment on over 1,200 cell sites in the New York metropolitan area").

[46] *Compare* S. Flannery, *et al.*, Morgan Stanley, *4Q06 Preview/2007 Outlook: Is Telecom Back for Good?* at 25 (Jan. 24, 2007) (reporting Sprint and Verizon Wireless 3G subscribers as of September 2006), *with* S. Flannery, *et al.*, Morgan Stanley, *3Q06 Preview: Stocks Priced for Good News* at 23 (Oct. 20, 2006) (reporting same data as of June 2006); *see also* R. Klugman, *et al.*, Prudential Equity, *The Dust Has Settled: We Think It's O.K. To Own Telecom Stocks Again* at 33 (July 20, 2006) ("In recent quarters, wireless carriers have shown rapid growth in data revenue per subscriber. Overall, data now represents 11.7% of post-paid service revenue for the four major carriers, and we expect data to grow to 19.3% of revenue by 2010.").

as social networking – that will be attractive in the mobile context.[47] The development of such content and applications is critical: it will drive consumer demand for wireless broadband services, and thereby permit carriers to realize the fruits of their massive investment in wireless broadband networks.[48] Appendix A to these comments demonstrates that fact by documenting more than 50 announced partnerships between wireless carriers and third-party content and application providers.

The race to develop services and content that will drive consumer demand for wireless broadband has already resulted in the deployment of many innovative services and applications. The Commission has found that "the major mobile telephone carriers and other mobile data providers have progressively introduced a *wide variety* of mobile data services and applications."[49] Analysts agree, explaining that "technology enhancements continue to bring more functionality to [wireless] devices," while carriers strive to contain costs and keep handsets affordable.[50]

One "notable example" of such innovation, the Commission has found, is "the introduction of an over-the-air music downloading service for mobile phones," with competition

---

[47] *See* Amol Sharma, *A Look at Mobile Devices and Services You Can Expect in the Next Year – and Beyond*, Wall St. J., Mar. 26, 2007, at R1 ("Cellphone operators . . . face slowing subscriber growth as the percentage of consumers who don't own a cellphone shrinks. To boost revenue, they have to find new ways to integrate mobile devices into people's lives. Similarly, handset manufacturers have to convince people who already own phones to buy new ones.") ("*A Look at Mobile Devices*").

[48] *See, e.g.*, T. Watts, *et al.*, Cowen and Company, *Mobile Content Delivery – The Next Wave of Wireless Growth* at 6 (June 28, 2006) ("We view the issue as . . . a chicken and egg problem with handset penetration driven by attractive programming. As more and more content becomes available, consumers will likely buy handsets to view it.") ("*Mobile Content Delivery*").

[49] *Eleventh Competition Report* ¶ 136 (emphasis added).

[50] IDC, *Mobile Usage Patterns 2006: Applications and Attitudes Driving Purchase Decisions* at 2 (Aug. 2006) ("*Mobile Usage Patterns 2006*").

driving Sprint, Verizon Wireless, and AT&T to develop competing music services.[51] In addition, carriers are investigating a variety of mobile video services. AT&T launched a streaming video service in 2006,[52] and Verizon Wireless and AT&T will soon be providing video services through a broadcast TV network that connects to wireless handsets.[53] Some carriers, moreover, have "made deals with the likes of video-sharing sites YouTube and Revver to make their videos available over cell networks."[54] MVNO Amp'd Mobile Inc. recently announced that it will sell Motorola's Q smartphone packaged with Sling Media Inc.'s SlingPlayer Mobile and Orb Network's place-shifting software pre-installed.[55] SlingPlayer Mobile will allow consumers to watch television on any smartphone; Orb's software will allow consumers to access their home cable TV and digital music.[56]

Despite the great potential of this nascent industry, wireless broadband poses many challenges to carriers, application providers, and handset manufacturers. Carriers and their partners must figure out a way to deliver broadband services and content that work well using wireless transmission, that are attractive on a small screen, that economize on battery life, and that do not require handsets that will be priced out of the market.[57] Addressing these issues requires close collaboration among carriers, applications developers, and handset manufacturers. The capacity to respond to emerging technologies and shifting consumer preferences requires

---

[51] *Eleventh Competition Report* ¶ 137.

[52] *See id.* ¶ 138.

[53] *See A Look at Mobile Devices* at R4.

[54] *Id.*

[55] *See* Matt Kapko, RCR Wireless News, *Amp'd Q Attacks Walled Garden with Orb, Sling Software* (Mar. 22, 2007).

[56] *See id.*

[57] *See* AT&T Decl. ¶ 13.

flexibility and innovation on the part of all industry participants, characteristics that are consistent with free-market competition.

Additional challenges arise from the shared nature of the wireless spectrum. The wireless spectrum that any carrier has to serve a particular geographic area is finite. That poses unique challenges in the wireless broadband world because it means that subscribers' uses of bandwidth-intensive applications can undermine the quality of service and bandwidth available to other subscribers.[58] In order to manage effectively shared wireless resources, and in addition to continuing efforts to improve spectrum efficiency, wireless carriers have adopted a variety of ways, addressed in more detail below,[59] to control excessive and harmful uses of bandwidth on their wireless networks. Given rapidly changing technology and evolving consumer preferences, these policies too are sure to change in response to the market.

Indeed, many of the developments described above are preliminary, and it remains to be seen precisely how the services and applications enabled by carriers' investment in 3G networks come to the market. Some of the applications described above will fail either as a technological matter or because consumers do not want them; others will be wildly successful. Which applications fall into which category, however, should be dictated by consumer demand and market forces, not regulatory fiat.

C. AT&T Is Competing Aggressively in the Wireless Industry

Because of the intense competition in the wireless industry, AT&T must continually fight to acquire and retain every one of its customers. As a result, AT&T has invested heavily in its network, has offered its customers a wide array of handset choices, and is moving aggressively

[58] *See id.* ¶ 12.

[59] *See infra* pp. 52-55, 58-63.

to deploy its 3G network and to develop (and partner with developers of) innovative services to ride over that network.

Between 1997 and 2006, AT&T invested more than $60 billion in capital expenditures on a nationwide wireless network designed to provide subscribers with outstanding service quality.[60] AT&T is continually striving to offer its subscribers higher-quality service, and its efforts have by all counts been succeeding. One measure of such success is AT&T's declining churn rate – the rate at which customers switch from AT&T to one of its competitors. As the quality of AT&T's network, handsets, and customer service has improved, AT&T's churn rate has declined from one of the highest in the industry to one of the lowest. Analysts agree that this decline is due to AT&T's ability to provide better service and a better customer experience.[61]

AT&T differentiates itself in the wireless industry not only by providing high-quality services that consumers demand, but also by offering consumers the most innovative and attractive wireless handsets. Overall, AT&T offers 39 handsets in its portfolio – the largest number of handsets of all wireless carriers.[62] In addition, AT&T has led the way in introducing

---

[60] The total includes expenditures of Cingular, SBC, and BellSouth. As of year-end 2005, it was estimated that total capital expenditures in the wireless industry were $199 billion. *See* CTIA, *Wireless Quick Facts – December 2006*, *at* http://www.ctia.org/media/industry_info/index.cfm/AID/10323.

[61] *See* T. Seitz, Lehman Brothers, *Earnings Preview: 2007 and 4Q06 Preview* at 10 (Jan. 23, 2007) (attributing decline in churn rate to "improvements in network quality" and predicting that consumers' rising perceptions of the quality of AT&T's network will continue throughout 2007); AT&T, Investor*Briefing* No. 256, *AT&T Delivers Strong First Quarter: Merger Integration on Track; Advances in Wireless, Business and Broadband Drive Results* at 4-5 (Apr. 24, 2007) (noting a total churn rate of 1.7%, down from 1.9% in the year-earlier quarter) , *available at* http://www.att.com/Investor/Financial/Earning_Info/docs/1Q_07_IB_FINAL.pdf.

[62] *See* J. Armstrong, *et al.*, Goldman Sachs, *December Wireless Pricing Analysis* at 4 (Dec. 20, 2006).

new innovations in wireless handsets.[63] AT&T was the first provider to offer the Motorola RAZR and the Motorola SLVR, and will soon offer the Apple iPhone (due out in June 2007).[64] The iPhone will contain a range of "highly integrated applications" and features, including WiFi, Safari web-browsing, and a Bluetooth headset.[65]

Competition is also spurring AT&T to invest heavily in wireless broadband, and AT&T is working to increase the performance, availability, and penetration of its wireless broadband services. AT&T's 3G network uses HSDPA/UMTS technology, which makes it possible for AT&T to offer a variety of feature-rich wireless services. AT&T's 3G network first became commercially available in 2004, and AT&T's customers can now use 3G connections in 165 cities, including 73 of the largest 100 markets nationally.[66] AT&T currently offers wireless broadband connections averaging 400-700 kbps.[67] To keep up with our competitors, AT&T spent $5.2 billion on its 3G build-out between 2003 and 2005, and is expected to spend an additional $14 billon on its network between 2006 and 2010.[68]

---

[63] *See Apple Wireless MVNO* at 4 ("Cingular has typically had the best handsets – with the exclusive carrier of the RAZR at its launch setting the tone.").

[64] *See* Cingular Press Release, *The Wait is Over: New Motorola RAZR V3 Now Available Exclusively at Cingular Wireless* (Nov. 16, 2004), *available at* http://att.centralcast.net/cingular newsarchive/Release.aspx?ID=3217; Cingular Press Release, *Ultra-Thin Motorola SLVR L7 Debuts Exclusively at Cingular Wireless* (Jan. 31, 2006), *available at* http://att.centralcast. net/cingularnewsarchive/Release.aspx?ID=3830; Cingular Press Release, *Apple Chooses Cingular as Exclusive U.S. Carrier for Its Revolutionary iPhone* (Jan. 9, 2007), *available at* http://att.centralcast.net/cingularnewsarchive/Release.aspx?ID=4200.

[65] Randy Giusto, *Apple's Revolutionary iPhone Changes the Mobile Phone Game*, IDC Link at 1 (Jan. 9, 2007).

[66] *See* AT&T Press Release, *Cingular Wireless Reports Fourth-Quarter 2006 Results* (Jan. 24, 2007), *available at* http://att.centralcast.net/cingularnewsarchive/Release.aspx? ID=4218.

[67] *See id.*

[68] *See* J. Halpern, *et al.*, Bernstein, *US Telecommunications: Big-5 Capex to Rise Again Modestly in '06 Before Declining in '07 and Beyond* at 9-10 & Exh. 14 (Feb. 17, 2006).

In an effort to make its wireless broadband services more attractive to consumers, AT&T is collaborating with handset and application providers to develop content to be provided over AT&T's 3G network. As noted above, AT&T launched a streaming video service in 2006, and AT&T will soon be providing video services through a broadcast TV network that connects to wireless handsets.[69] AT&T also offers handsets and wireless services that support a variety of music offerings and formats, including MP3, WAV, iTunes, Walkman, and Napster.[70] AT&T was the first wireless carrier in the United States to introduce a wireless navigation system with 3D maps and searching capability.[71] AT&T has also partnered with Melodeo Inc. to make Melodeo's Mobile podcast service available to AT&T subscribers.[72] In addition, AT&T joined with the NCAA to provide access to video highlights and personalized coverage of the NCAA tournament.[73] AT&T is also constantly working to optimize web-browsing on its wireless handsets. AT&T subscribers can access all sites on the worldwide web via their handsets, and

[69] *See supra* p. 16.

[70] *See* Cingular, *Music Center and Music Phones*, *at* http://www.cingular.com/learn/music-video/music-center.jsp (visited Apr. 24, 2007).

[71] *See* Cingular Press Release, *Cingular Unveils PDA-Based Wireless GPS Navigation System With 3D Moving Maps* (Nov. 20, 2006), *available at* http://att.centralcast.net/cingular newsarchive/Release.aspx?ID=4159.

[72] *See* Cingular Press Release, *Listen Up. Cingular Teams With Melodeo to Offer Mobile Podcasting* (Oct. 2, 2006), *available at* http://att.centralcast.net/cingularnewsarchive/Release.aspx?ID=4086.

[73] *See* Cingular Press Release, *Cingular Wireless' New MEdia Net NCAA March Madness Portal is the Exclusive Home for Official NCAA Tournament Video Highlights, News and Analysis on Your Wireless Phone* (Mar. 13, 2006), *available at* http://att.centralcast.net/cingularnewsarchive/Release.aspx?ID=3858.

AT&T is continually working to optimize the web-browsing experience of particular sites by working with application providers, such as Yahoo![74]

In striving to offer new and innovative content and services, AT&T, handset manufacturers, and application providers face a variety of interrelated challenges resulting from the shared nature of the wireless spectrum and the growing complexity of wireless handsets. To manage these concerns, AT&T has adopted various policies which are described in greater detail below.

One such policy is handset certification, which is a critical component of AT&T's quality control processes. By certifying handsets (and strongly encouraging customers to use certified handsets), AT&T is able to ensure to ensure that individual customers receive a higher level of service quality, but also that those customers make more efficient use of AT&T's limited spectrum – thereby lowering costs and increasing service quality for *all* AT&T customers.[75] To those ends, AT&T's certification procedures involve a variety of tests that ensure that handsets connected to the network are optimized for use with AT&T's network, seamlessly interoperate across AT&T's various GSM network suppliers, and allow for the efficient use of wireless spectrum. Certification also ensures that a subscriber's handset is integrated with and capable of supporting various services and functionalities enabled by AT&T's wireless service.[76]

AT&T's application "signing" policies similarly reflect sound principles of network management. AT&T does not require approval of all applications. Instead, certification procedures are a way of addressing threats to the network by granting different levels of access

---

[74] *See* Cingular Press Release, *Yahoo! Go Mobile to Launch with AT&T, Cingular and Nokia* (Jan. 6, 2006), *available at* http://att.centralcast.net/cingularnewsarchive/Release.aspx?ID=3811.

[75] *See* AT&T Decl. ¶ 21; *see also infra* pp. 58-60.

[76] *See* AT&T Decl. ¶ 23.

to devices – especially the personal contact information typically stored on a handset – and network resources. These procedures serve three basic aims: (i) ensuring the customer is provided high-quality service; (ii) protecting access to the personal information stored on a handset; and (iii) ensuring that applications do not access network resources, and thus generate charges to the end user, without the end user's knowledge and approval.[77]

Finally, AT&T has established handset policies designed to drive demand for AT&T's services. Wireless handsets are expensive. To encourage subscribership, AT&T, like most carriers, is willing to absorb a significant amount of the cost of handsets in return for a service commitment. AT&T therefore sells handsets that are locked for the duration of the subscriber's service commitment. After that obligation is fulfilled, AT&T has a policy of unlocking a handset at a consumer's request if the handset supplier has permitted AT&T to do so and provided AT&T with this capability.[78] By enabling carriers to recover the subsidies incurred in the sale of wireless handsets, locking encourages carriers to provide subsidies, which in turn promotes pro-consumer ends – namely, greater subscribership to wireless services and market diffusion of new and innovative handsets.[79] Although most customers choose a subsidized handset, AT&T offers the choice of purchasing an unsubsidized handset that can be immediately unlocked.

In all cases, AT&T's policies are ultimately intended to ensure that it can provide reliable, high-quality service to all existing and potential subscribers. As discussed below, in the robustly competitive wireless marketplace, it is those subscribers – not regulators – that can best

[77] *See id.* ¶¶ 37-38; *see also infra* pp. 60-63.

[78] *See* AT&T Decl. ¶ 15.

[79] *See id.* ¶¶ 15-16; *see also infra* pp. 56-58.

decide whether the policies of AT&T, or any other wireless provider, are desirable and in the interests of customers.

DISCUSSION

I. *CARTERFONE* HAS NO APPLICATION TO THE WIRELESS INDUSTRY

The core of Skype's petition (at 1) is a "request [for] enforcement of the Commission's *Carterfone* principle in the market for wireless communications and Internet access." This request rests on a mistaken understanding of the history, purpose, and effects of the *Carterfone* ruling itself, as well as a deeply flawed understanding of the appropriateness of Commission intervention in competitive industries.

A. The *Carterfone* Decision Is Limited to the Monopoly Wireline Context

Skype's petition starts from the premise that the *Carterfone* decision is controlling here and necessarily mandates pervasive attachment regulations. That position ignores dispositive differences between the wireline industry in 1968 and the wireless industry today, as well as how the Commission and the courts apply §§ 201 and 202 of the Communications Act in light of those differences. It is wrong as a matter of law.

At issue in *Carterfone* was whether the Bell System could lawfully prohibit the Carterfone device from being attached to a wireline network through a tariff provision that broadly prohibited attachment of *any* "equipment, apparatus, circuit or device not furnished by the telephone company."[80] The Commission found, based on the record before it, that the Carterfone device did "not adversely affect the telephone system,"[81] and therefore "that

[80] *Carterfone*, 13 F.C.C.2d at 421.

[81] *Id.* at 423.

application of the tariff to bar the Carterfone . . . would be unreasonable and unduly discriminatory."[82]

Those holdings have no relevance to the wireless industry, which is not subject to tariff requirements and is robustly competitive. Indeed, although *Carterfone* rested on the Commission's authority under §§ 201 and 202 of the Communications Act,[83] the Commission has been clear that those provisions are applied differently in the wireless industry, where competition and "market forces" can be expected to safeguard consumers from unreasonable carrier practices.[84] The D.C. Circuit affirmed that approach, reasoning that the Commission is entitled to "value the free market, the benefits of which are well-established," in interpreting and applying §§ 201 and 202 in the wireless industry.[85] More generally, moreover, the Commission has been clear that in a competitive industry – unlike the regulated monopoly-era of *Carterfone* – industry practices are "presumptively" reasonable.[86]

---

[82] *Id.* On reconsideration, the Commission made clear the limited nature of its holding regarding common carriers' tariff practices, explaining that *Carterfone* decided only that "the Carterfone filled a need, that its use did not adversely affect the telephone system, that its use was nevertheless precluded by the tariff, and that the tariff was unlawful . . . because it prohibited the use of the Carterfone . . . without regard to actual harm caused to the telephone system," and that its decision did not have the "effect of delineating any particular interconnections as permissible," but simply required that "*tariffs* [be] reasonably addressed to the asserted problems." Memorandum Opinion and Order, *Use of the Carterfone Device in Message Toll Telephone Service*, 14 F.C.C.2d 571, ¶¶ 3-4 (1968) (emphasis added) ("*Carterfone Reconsideration Order*").

[83] *See Carterfone*, 13 F.C.C.2d at 425-26.

[84] Memorandum Opinion and Order, *Orloff v. Vodafone AirTouch Licenses LLC*, 17 FCC Rcd 8987, ¶¶ 20, 26 (2002) ("*Orloff Order*"), *petition for review denied, Orloff v. FCC*, 352 F.3d 415 (D.C. Cir. 2003).

[85] *Orloff*, 352 F.3d at 421 (internal quotation marks omitted).

[86] For example, the Commission considers the rates charged by a nondominant carrier – that is, a carrier that lacks market power – "presumptively lawful." Order, *Tariff Filing Requirements for Nondominant Common Carriers*, 10 FCC Rcd 13653, ¶ 3 n.13 (1995) ("*Tariff Filing Order*"); *see also* Second Report and Order in CC Docket No. 96-149 and Third Report and Order in CC Docket No. 96-61, *Regulatory Treatment of LEC Provision of Interexchange*

As a straightforward interpretive matter, then, *Carterfone* is inapposite. The decision provides no precedent for adopting an expansive regulatory regime for the wireless industry, in which wireless carriers, "[b]ecause of the competitive . . . environment," are not subject to any tariff requirements,[87] in which "market forces" will presumptively safeguard consumers' interests,[88] and in which carriers' practices are "presumptively" reasonable.[89]

B. *Carterfone* Should Not Be Extended to the Wireless Industry

Nor should the Commission extend *Carterfone* to the wireless industry. Whereas *Carterfone* was designed to spur competition in a mature, vertically integrated, monopoly environment, the competitive conditions of the wireless industry today are different in every respect. In light of those differences, there is no plausible basis for imposing the pervasive regulatory mandate that Skype seeks.

1. The principle for which *Carterfone* has come to stand – namely, the goal of encouraging competition in markets adjacent to the wireline network by preventing carriers from restricting attachments – was predicated on the absence of competition in *both* the primary wireline telecommunications market *and* the adjacent customer premises equipment ("CPE") market. Because there is already substantial competition for the wireless service *and* for wireless handsets, there is no cause for imposing monopoly-era regulation on the wireless industry.

Services Originating in the LEC's Local Exchange Area, 12 FCC Rcd 15756, ¶ 118 n.336 (1997) (noting that the Commission gives a "presumption of lawfulness . . . to nondominant carrier rates and practices" in cases involving alleged "violations of sections 201(b) and 202(b)").

[87] Notice of Proposed Rulemaking, *Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission's Rules*, 16 FCC Rcd 11169, ¶ 60 (2001); *see also* 47 U.S.C. § 332(c)(1)(A); 47 C.F.R. § 20.15.

[88] *Orloff Order* ¶ 20.

[89] *Tariff Filing Order* ¶ 3 n.13.

There can be no serious dispute that the Commission adopted *Carterfone* in a competitive context vastly different from what characterizes the wireless industry today. At the time of the decision in the late 1960s, the Bell System had a stranglehold on all facets of the telecommunications industry.[90] In areas in which a Bell company was the local exchange provider, consumers had no competitive choice because of exclusive franchises.[91] In addition, the Bell System was essentially the only provider of long-distance services.[92] As the Commission has previously said, *Carterfone* and its progeny were adopted at a time when "AT&T controlled . . . the public switched telephone network itself."[93]

Beyond its monopoly position in the local and long-distance markets, the Bell System dominated the market for CPE. At the time of *Carterfone*, the Bell System, through its subsidiary Western Electric Company, "made virtually every telephone used in America."[94]

---

[90] *See* Report and Order, *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices*, 13 FCC Rcd 14775, ¶¶ 11-12 (1998) (noting that prior to *Carterfone* "consumers leased telephones from their service provider and *no marketplace* existed for those wishing to purchase their own phone" and that, "[w]hen customer ownership of telephone CPE became available, the telephone network was effectively a *national monopoly*") (emphases added) ("*Navigation Devices Order*").

[91] Peter W. Huber, Michael K. Kellogg & John Thorne, *Federal Telecommunications Law* 2 (2d ed. 1999) (under old regulatory regime, "would-be competitors were barred from competing . . . with the enfranchised carrier," making "natural monopoly . . . a self-fulfilling prophecy").

[92] *See* J. Zolnierek, *et al.*, Indus. Analysis Div., Common Carrier Bureau, FCC, *Long Distance Market Shares Fourth Quarter 1998*, at 21, Table 3.6 (Mar. 1999) (showing that AT&T and Alascom accounted for 99.7% of all toll revenue in 1976, with competitive carriers garnering just 0.3% of the market) , *available at* http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/mksh4q98.pdf; *id.* at 12 ("In 1976, AT&T and local exchange carrier (LEC) revenues constituted more than 99% of all long distance telephone service revenues.").

[93] Report and Order, *2000 Biennial Regulatory Review of Part 68 of the Commission's Rules and Regulations*, 15 FCC Rcd 24944, ¶ 8 (2000) ("*Part 68 Review Order*").

[94] Steve Coll, *The Deal of the Century: The Breakup of AT&T* 9 (1986); *see also id.* at 11 ("[b]efore *Carterfone*, AT&T had owned virtually every residential telephone and business switchboard in the country"); Alan Stone, *Wrong Number: The Breakup of AT&T* 155 (1989)

Even by the time of the breakup of the Bell System, that largely remained the case.[95] Because of the unrivaled position of the Bell System, CPE technology was "primitive,"[96] with customers able to "purchase [CPE] only from AT&T's affiliated manufacturing arm, only on a monthly rental basis, [and] with no ability to add additional features."[97] As one commentator described the pace of innovation,

> [p]rior to divestiture, AT&T controlled the pace of technological development and innovation. Virtually every product in the telephone network was developed and made by Western Electric. . . . Ma Bell decided when a new feature would be offered and who could use it. In other words, the American consumer had no choice. He had to wait for something other than a black telephone, yet was brought the Picturephone without wanting it.[98]

The purpose of *Carterfone* and its progeny was to end this stranglehold by the vertically integrated Bell companies over the CPE market.

The circumstances could not be more different in the wireless industry. *First*, as demonstrated above, there is robust competition among wireless carriers. Because no wireless carrier has market power, no wireless carrier has the ability to affect adversely handset

---

("Stone, *Wrong Number*") ("In 1965, an already high 85 percent of households had telephone service; by 1975, the figure had risen to 93 percent. During the same period, the total number of telephones in use (including company, service, and private) had risen from 82 to 130 million. The Bell System accounted for most of the totals as well as the increases.").

[95] *See, e.g.*, Comments of the State of Washington Utilities and Transportation Commission at 9, *United States v. Western Elec. Co.*, Civ. No. 82-0192 (D.D.C. filed Apr. 15, 1982) ("AT&T, through Western Electric, entirely dominates the domestic market for CPE and telephone switching gear. Until a competitive domestic industry develops, there will be no significant alternative domestic sources of supply for most major products.").

[96] Peter Huber, *The Geodesic Network: 1987 Report on Competition in the Telephone Industry* at 1.2, Report for the Antitrust Division of the United States Department of Justice (Jan. 1987) ("[u]ntil about 1970 . . . [CPE] was primitive, and occupied a correspondingly humble position at the very lowest level of the network pyramid").

[97] Kevin Werbach, *Breaking the Ice: Rethinking Telecommunications Law for the Digital Age*, 4 J. Telecomm. & High Tech. L. 59, 82-83 (2005).

[98] Thomas W. Cohen, *Innovation and New Services*, *in* Barry Cole (ed.), *After the Break-Up: Assessing the New Post-AT&T Divestiture Era* 319-20 (1991).

competition. To the contrary, any carrier that attempted to deny consumers the handsets and handset options they desire would pay the price exacted by competitive markets: lost business.

Second, unlike the wireline marketplace at the time of *Carterfone*, there is virtually no vertical integration between wireless carriers and handset manufacturers. Whereas at the time of *Carterfone* the Bell System could leverage power in one market (wireline telecommunications) to dominate an adjacent market (CPE), there is no remotely comparable danger in the wireless industry today. For that reason as well, *Carterfone* is inapt.[99]

Third, in contrast with the monopoly CPE environment at the time of *Carterfone*, today's handset industry is intensely competitive. Indeed, there are more than 10 manufacturers of wireless handsets, none of which has a market share of more than one-third.[100] As a result of the intense competition among wireless carriers, those carriers compete fiercely to provide customers with the best and most innovative handsets.[101] AT&T alone offers customers more than 39 handset options that are designed for varying market segments. AT&T offers handsets that are optimized for downloading music and for video[102] and handsets with instant messaging and text-messaging capabilities. It offers Blackberry and other handsets with email capabilities and smartphones that provide an array of advanced functionalities for enterprise customers. It

[99] Given the robustness of competition in the marketplace, even some vertical integration would pose no threat to competition or to consumers.

[100] *See* NPD Group Press Release, *The NPD Group: U.S. Mobile Phone Sales Reached $4.4 Billion in the First Half of 2006* (Aug. 15, 2006).

[101] *See* D. Barden, *et al.*, Bank of America, *Wireless Services & Handset Pricing Analysis* at 8 (Dec. 19, 2006); *see also A Look at Mobile Devices* at R1, R4.

[102] AT&T, for example, sells the LG CU500, which is designed to satisfy all sorts of entertainment needs, with a rotating 1.3 megapixel camera, streaming TV, 3D stereo sound, and an MP3 music player. *See* http://www.cingular.com/cell-phone-service/cell-phonedetails/?q_list= true&q_phoneName=LG+CU500&q_sku=sku1000019-0 (visited Apr. 26, 2007).

offers handsets with Push to Talk capability,[103] handsets with large buttons and large screens,[104] and handsets that are as thin as credit cards.

Given these fundamental competitive characteristics of the wireless industry, no carrier, contrary to Skype's claim (at 4), has the incentive or ability to limit consumer choice in handsets. Indeed, a federal court recently rejected the very premise of Skype's petition by holding that wireless carriers lacked sufficient power to dictate manufacturing practices. In *Wireless Antitrust Litigation*, plaintiffs sued national wireless carriers alleging, among other things, that the requirement of purchasing an approved handset constituted unlawful tying under § 1 of the Sherman Act.[105] The district court, after extensive factual discovery, granted summary judgment for the carriers, holding that plaintiffs had failed to show that "any one of the defendants had sufficient power in the market for wireless service to 'force' consumers . . . to purchase unwanted handsets."[106] The court found that the wireless industry was robustly competitive, as wireless carriers "compete against each other in terms of service and price," and, the court noted, "the high churn rate is striking evidence of their respective lack of control over the market."[107] That decision underscores the basic economic flaw underlying Skype's petition – that, even if

[103] The Sony Ericsson Z525a comes with, among other things, instant-messaging and Push to Talk. *See* http://www.cingular.com/cell-phone-service/cell-phone-details/?q_list=true&q_phoneName=Sony+Ericsson+Z525a&q_sku=sku1000083-0 (visited Apr. 26, 2007).

[104] AT&T offers the FireFly, which is designed for children and has a simplified interface, large buttons, parental controls, and dedicated speed-dial buttons for parents. *See* http://www.cingular.com/cell-phone-service/cell-phone-details/?q_list=true&q_phoneName=Firefly+(Refurb)&q_sku=sku1000008-2 (visited Apr. 26, 2007).

[105] *See* 385 F. Supp. 2d at 405.

[106] *Id.* at 417.

[107] *Id.*; *see also id.* at 429 (holding that, "[g]iven the competition within the wireless market, and [individual wireless carriers'] lack of market power," a carrier would not have the "ability" to "stifle[ ] competition in the handset market").

carriers wanted to dictate manufacturing practices in an effort to limit competition, they couldn't – and thus demonstrates why Skype's call for monopoly-era regulation is unfounded.

Indeed, the competitive state of the industry means that the supposed benefit that Skype claims would stem from application of *Carterfone* and the Commission's Part 68 rules has already been attained. The Commission has acknowledged that, where competition reigns, Part 68 has little place, largely eliminating its role in the Part 68 process because of the competitive state of the CPE market. In the *Part 68 Review Order*, the Commission decided to "completely eliminate significant portions of Part 68" and to "minimize or eliminate the role of the government in [the Part 68] processes" because, the Commission reasoned, "the public interest can be better served through reliance on market forces."[108] The Commission found that, "[i]n the years since Part 68 was established . . . , the marketplaces for both terminal equipment and local exchange service have changed dramatically," with "[v]ibrant competition . . . in the terminal equipment marketplace."[109] Those same competitive conditions *already* exist in the wireless industry, which has never exhibited monopoly conditions. There is plainly no basis for imposing regulations designed to achieve a goal that has already been realized.

2. In the face of the competitive state of the wireless industry, Skype is forced to claim (at 24) that *all* competing carriers share an incentive to foreclose the adoption of certain functionalities and applications. Skype's charge is specious. As noted, wireless carriers' overriding incentive is to keep and win customers: carriers that fail to do so will be driven from the industry. For that reason, wireless carriers have powerful incentives to deliver to consumers the functionalities and options they value.[110] So long as there are competing wireless carriers to

[108] *Part 68 Review Order* ¶ 1.

[109] *Id.* ¶ 11.

[110] *See* AT&T Decl. ¶¶ 25-26.

which consumers can turn, these market forces will continue to drive innovation in the wireless industry.

But even a competitive industry will not produce an infinite array of functionalities and applications. Issues of cost, usability, service quality, consumer demand, and network efficiency create tradeoffs with respect to a carrier's adoption of any functionality or application.[111] A survey of consumer preferences shows, for example, that many customers want quality and reliability, not more features and functionalities: 78% of consumers cite network coverage and reliability as a priority for wireless service; 64% of consumers cite cost as a priority; and 38% of consumers consider whether handsets are easy to use a priority.[112] In fact, analysts have noted that there is a "high percentage of mobile phone and smartphone users who have applications on their devices but don't actually use them," a signal to the industry that "not everyone will want to play games or surf the Web on their mobile device."[113] Given the range of consumer priorities – many of which work at cross-purposes – the industry should not be expected to support every conceivable functionality and application.

To the contrary, carriers should be able to offer those products and services that they believe their customers will value and that are compatible with their networks. Carriers that achieve the proper balance – that is, a balance that *consumers* desire – will be rewarded by the market; carriers that do not will be disciplined.[114] By the same token, if an application provider

---

[111] *See id.* ¶ 26.

[112] *See* J. Porus, Harris Interactive, *What Will Wireless Carriers Want Next?* Wireless Wave (Spring 2006); *see also Eleventh Competition Report* ¶ 133 (citing evidence that wireless carriers are responding to consumer demand by competing on issues of "network reliability").

[113] *Mobile Usage Patterns 2006*, at 12-13.

[114] The same dynamic applies to manufacturers. Recent financial data, for example, suggest that high-end devices are not in demand in the marketplace. *See* Reuters, *Motorola Warns of a First-Quarter Loss*, L.A. Times, Mar. 22, 2007 (quoting financial analyst explaining

can develop a product that is cost-effective, compatible with the network, and attractive to consumers, it will likely be able to strike deals with carriers. If it can't, it won't. Either way, however, it is for the marketplace, not the Commission, to decide.

This principle – that competition will drive innovation – is dispositive here. The Commission recently found, based on record evidence, "that competitive pressure continues to drive carriers to introduce innovative pricing plans and service offerings, and to match the pricing and service innovations introduced by rival carriers."[115] That same dynamic drives carriers to sell handsets with the functionalities and applications that consumers desire, which is proof positive that the industry is functioning well[116] and easily rebukes Skype's claim (at 13) of an "innovation bottleneck." As the Commission has said, "the major mobile telephone carriers and other mobile data providers have progressively introduced a wide variety of mobile data services and applications."[117]

Indeed, Skype's self-serving and unsupported claim of an "innovation bottleneck" is utterly out of touch with the marketplace. The spate of innovation in wireless carriers' provisioning of music and video services documented above is clear proof that competitive forces are driving innovation. Beyond music and video, moreover, many other functionalities are being added to wireless handsets or are on the horizon. Handset manufacturer LG

---

that Motorola is "losing a ton of money in phones" and that it "need[s] to design lower-priced phones that are designed to be profitable at a much lower price"), *available at* http://www.latimes.com/business/la-fi-motor22mar22,1,6946757.story?coll=la-headlines-business&ctrack=1&cset=true. That is further proof that endless functionalities – especially those that drive up cost – are not a consumer priority.

[115] *Eleventh Competition Report* ¶ 3.

[116] *See id.* ¶ 101 ("Service provides in the mobile telecommunications market also compete on many more dimensions other than price, including non-price characteristics such as coverage, call quality, data speeds, and mobile data content.").

[117] *Id.* ¶ 136.

Electronics, for example, recently announced that it will install Google software on millions of mobile handsets in North America, Europe, and Asia.[118] Google already has similar agreements with Motorola Inc., Samsung Electronics, and Sony Ericsson.[119] Yahoo! also is making an aggressive effort to be an application leader in the wireless industry.[120]

The list of current and potential innovations and innovators could go on. The point here is that there is no "innovation bottleneck," and nothing Skype says is to the contrary.

3. The dynamic, quickly evolving nature of the wireless broadband industry further demonstrates that *Carterfone* is a poor regulatory fit for the wireless industry.

Carterfone and the Part 68 regulations that flowed from it came about at a time when the wireline telecommunications market was mature, with the vast majority of American households subscribing to wireline service and with the Bell System as the unrivaled local and interexchange provider.[121] The technology associated with the basic wireline telephone network was relatively static and well-understood. In that context, the risk of crafting poor regulations, or regulations that would soon be rendered obsolete as a result of technological change, was minimized.

The contrast with today's wireless industry is stark. While Skype describes (at 1) the wireless industry as "mature[ ]," the truth is that it is rapidly evolving, particularly with regard to the broadband wireless Internet access services that lie at the heart of Skype's petition. The mobile broadband industry is still in its nascent stages – with a penetration rate of a mere 1.6%

---

[118] Kevin J. Delaney, *LG Electronics to Offer Phones With Google Software*, Wall St. J., Mar. 28, 2007, at A15.

[119] *See id.*

[120] Monica Alleven, *Battle of the Power Houses*, Wireless Week (Apr. 1, 2007), *available at* http://www.wirelessweek.com/article.aspx?id=138468.

[121] *See* Stone, *Wrong Number* at 155 ("In 1965, an already high 85 percent of households had telephone service; by 1975, the figure had risen to 93 percent.").

of the total wireless subscriber base.[122] As carriers build out their 3G networks and expand their wireless broadband offerings, they are embarking on an ongoing process of evaluating how they can best tap into the enormous potential of this market. Under these circumstances, it should be no surprise, as the Commission found, that "[w]ireless broadband technologies and the business models for their deployment continue to evolve at a rapid pace."[123] Even Skype has acknowledged (at 6) that the business models and relationships in the wireless industry are "fast-moving and multi-dimensional."

To be sure, the market is poised to take off. Carriers already have invested huge sums of money in 3G networks, and they continue to do so. As explained, wireless carriers have made substantial investments in 3G capabilities, and will continue aggressively to expand such capabilities.[124] And, as the Commission found in the *Wireless Broadband Order*, "[t]he number of reported subscribers to wireless broadband Internet access service continues to grow."[125] Indeed, general mobile wireless Internet users went from "fewer than half a million subscribers in 2005 to more than 10 million subscribers in 2006."[126] This rapid growth, though, cannot be mistaken for a mature market; to the contrary, it is the direct result of deregulatory policies that permit wireless carriers to offer applications and services based on the dictates of competitive markets, not regulatory fiat.

---

[122] *See* S. Flannery, *et al.*, Morgan Stanley, *Speed Is Key as Broadband Market Matures* at 10 (Jan. 26, 2007).

[123] Declaratory Ruling, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, WT Docket No. 07-53, FCC 07-30, ¶ 17 (rel. Mar. 23, 2007) ("*Wireless Broadband Order*").

[124] *See supra* pp. 13-14.

[125] *Wireless Broadband Order* ¶ 17.

[126] William J. Baumol, *et al.*, AEI-Brookings Joint Center for Regulatory Studies, *Economists' Statement on Network Neutrality Policy* at 1 (Mar. 2007) ("*Economists' Statement*").

Regulatory intervention in this dynamic, emerging industry could turn this emerging success story on its head. Because carriers have made enormous investments in their networks to provide broadband services, they will strive to make these services as attractive as possible to spur demand.[127] In contrast, regulations such as those requested by Skype would constrain the flexibility of carriers to design and utilize their networks in the most efficient and innovative manner, and would constrain how carriers provide and sell wireless handsets, thereby deterring investment and innovation in the wireless broadband industry. Particularly in rapidly changing industries such as this, regulation is likely to "hamper future innovation by locking in a particular approach to content distribution that may in fact prove anachronistic very quickly."[128]

Even if there were signs here of a market failure (which there are not), the regulatory intervention Skype seeks would not be warranted. Skype is requesting nothing less than the adoption of standards, written and overseen by the Commission, that would govern how carriers, handset manufacturers, and application developers interact. Particularly given the nascent state of the industry, the problems of imperfect information, and complexity of the endeavor, the likelihood that the Commission could get those standards "right" – that it could, for example, build in the optimal level of flexibility, while guarding against only the supposed harms that Skype identifies as the rationale for its petition – is miniscule. And the dangers of getting it wrong – by, for example, foreclosing the sort of close partnership that may be necessary to provide truly innovative broadband services that are well-suited for the mobile environment – are

---

[127] *Mobile Content Delivery* at 6 ("We view the issue as . . . a chicken and egg problem with handset penetration driven by attractive programming. As more and more content becomes available, consumers will likely buy handsets to view it.").

[128] *Comments of the Section of Antitrust Law of the American Bar Association in Response to the Federal Trade Commission's Request for Public Comment Regarding Broadband Connectivity Competition Policy, available in Icarus* at 9-10 (Mar. 2007) ("*ABA FTC Comments*").

extreme. And, even in the highly unlikely event that the Commission was able to devise a set of rules that, when adopted, optimally addressed industry circumstances, the rapid pace of change in the nascent wireless broadband industry would quickly render those rules obsolete and inefficient. It is impossible to see how such regulatory risks would be worth taking in today's robustly competitive industry.

In sum, the Commission has consistently refused to impose costly economic regulation on the nascent broadband industry, because the application of monopoly-era regulation to a dynamic, emerging industry "would impede the development and deployment of innovative . . . technologies and services."[129] That principle applies with full force here and forecloses the extension of *Carterfone* that Skype seeks.

C. The Absence of Market Failure in the Wireless Industry Is Fatal to Skype's Plea for Regulation

Beyond the fact that *Carterfone* is inapposite here, the absence of a market failure compels rejection of Skype's petition. The Commission has long recognized that, in the words of Chairman Martin, "competition is preferable to regulation."[130] "Market forces are the best method of delivering choice, innovation, and affordability to consumers," and the Commission should "step in and take action" only where there are "market failures."[131] Commissioner

---

[129] Report and Order and Notice of Proposed Rulemaking, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, ¶ 65 (2005) ("*Wireline Broadband Order*").

[130] FCC News Release, *Press Statement of Commissioner Kevin J. Martin on the Commission's Decision on Verizon's Petition for Permanent Forbearance from Wireless Local Number Portability Rules* (July 16, 2002), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-224368A4.pdf.

[131] *Id.*

Adelstein has made a similar point, arguing that the Commission "should let innovation and the marketplace drive the development of spectrum-based [wireless] services."[132]

This Commission's policy is grounded not only in sound economics, but also in a congressional mandate. In 1993 for wireless,[133] and in 1996 for broadband,[134] Congress adopted federal policies to promote the deployment of wireless and broadband services, and it expressed a clear preference that market forces and deregulation be used to accomplish those objectives. Implementing these mandates, the Commission has formulated a "uniform, national and

---

[132] Jonathan S. Adelstein, Commissioner, FCC, *Accessing the Public Interest*: *Keeping America Well-Connected* at 5, Remarks Before the 21st Annual Institute on Telecommunications Policy & Regulation, Washington, DC (Dec. 4, 2003), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-241881A1.pdf; *see also 2000 Biennial Report*, Dissenting Statement of Commissioner Michael J. Copps at 3 (noting that the wireless industry is "a great success story," and one in which carriers "give customers a wide variety of services and technologies"); Robert M. McDowell, Commissioner, FCC, *Statement Before the Subcommittee on Telecommunications and the Internet of the House Committee on Energy and Commerce* at 3 (Mar. 14, 2007) ("I want consumers to have the freedom to have their demands satisfied. I want entrepreneurs to have the freedom to innovate and bring their products and services to market so they can satisfy those consumers' demands. Overall, I trust free people acting within free markets to make better decisions for themselves than those of us in government. Government should not adversely interfere with the relationships between consumers and entrepreneurs."), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-271487A1.pdf.

[133] *See* 47 U.S.C. § 332(a)(2), (3) (stating intent of Congress to "encourage competition and provide services to the largest feasible number of users," and that it seeks to do so by "reduc[ing] the regulatory burden upon spectrum users").

[134] *See id.* § 230(b)(2) (it is "the policy of the United States" to "preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation").

deregulatory framework" for wireless services[135] and a "comprehensive" national policy of "nonregulation of information services."[136]

Policymakers' longstanding recognition that, absent market failure, free-market competition is preferable to regulation reflects the basic principle of public policy that markets allocate resources more efficiently than government regulators.[137] "A market unencumbered by regulation will maximize innovation and consumer welfare, encouraging networks to invest in innovation and ultimately facilitating improvements to the infrastructure that will benefit all consumers."[138] In competitive markets, regulation – with its attendant costs and stifling of

---

[135] Second Report and Order, Declaratory Ruling, and Second Further Notice of Proposed Rulemaking, *Truth-in-Billing and Billing Format*, 20 FCC Rcd 6448, ¶ 35 (2005); *see also Eleventh Competition Report* ¶ 6 (with regard to wireless services specifically, the Commission has emphasized that Congress has "established the promotion of competition as a fundamental goal for [wireless] policy formation and regulation").

[136] *Wireline Broadband Order* ¶ 45; Memorandum Opinion and Order, *Vonage Holdings Corporation, Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, 19 FCC Rcd 22404, ¶¶ 14, 21 (2004) ("Although Congress did not explicitly prescribe the regulatory framework for Internet-based communications like DigitalVoice when it amended the Act in 1996, its statements regarding the Internet and advanced telecommunications capabilities in sections 230 and 706 indicate that our actions here are consistent with its intent concerning these emerging technologies.") (footnote omitted); Memorandum Opinion and Order, *Petition for Declaratory Ruling That pulver.com's Free World Dialup Is Neither Telecommunications Nor a Telecommunications Service*, 19 FCC Rcd 3307, ¶ 16 (2004) ("Congress has explicitly stated [that Internet and other interactive computer services] should remain free of regulation."); *see also* Telecommunications Act of 1996, Pub. L. No. 104-104, § 706(a), 110 Stat. 56, 153 ("1996 Act"), reprinted at 47 U.S.C. § 157 note (directing FCC to "encourage the deployment . . . of advanced telecommunications capability to all Americans" by, among other things, "methods that remove barriers to infrastructure investment").

[137] *See, e.g.*, Statement of Kevin J. Martin, Chairman, FCC, *FCC Adopts Annual Report on State of Competition in the Wireless Industry* at 1 (Sept. 26, 2006) (noting that Commission annual report makes clear "that the competitive marketplace for wireless services is continuing to bring consumers more choice, better services, and lower prices"), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-142A2.pdf.

[138] *ABA FTC Comments* at 5; *see also id.* at 9 (broad nondiscrimination principle would make "investment in networks" risky, thereby "deter[ring] innovative new broadband providers

innovation – is unwarranted because market forces will adequately safeguard consumers' interests.[139]

In addition to being unnecessary to safeguard consumers, imperfect regulation affirmatively harms consumers, by distorting investment, increasing costs, and resulting in poorer services at higher prices. And, as set forth above, that risk – *i.e.*, that regulation will undermine the efficient operation of industries – is at its zenith when regulation is applied to a dynamic and emerging industry, such as the wireless broadband industry.[140]

The above principles animate the Commission's deregulatory policy with respect to wireless communications generally,[141] and wireless broadband specifically,[142] and should dictate the Commission's resolution of Skype's petition here. As a matter of basic economic and regulatory policy – as well as the clear statutory preference for competition[143] – the Commission should not impose regulations on the wireless industry unless it first identifies a concrete market failure that is working to the detriment of consumers. Speculation about harm to consumers that

---

from entering the market – a result that would present consumers with reduced competition in the broadband network market").

[139] *Cf. Orloff Order* ¶¶ 19-20 (rejecting price-discrimination claim against wireless carrier on the ground that, in light of "vibrant competition" among providers, "market forces protect . . . consumers").

[140] *See Economists' Statement* at 1 (noting that "[h]ighly dynamic markets, such as those for high-speed Internet services, pose particular problems [for regulators] because they change so quickly"); *see supra* pp. 34-36.

[141] *See, e.g.*, Second Report and Order, *Implementation of Sections 3(n) and 332 of the Communications Act; Regulatory Treatment of Mobile Services*, 9 FCC Rcd 1411, ¶ 173 (1994) (stating that, "in a competitive market, market forces are generally sufficient to ensure the lawfulness of rate levels, rate structures, and terms and conditions of service set by carriers who lack market power" and that "[r]emoving or reducing regulatory requirements . . . tends to encourage market entry and lower costs").

[142] *See Wireless Broadband Order* ¶¶ 4, 27 (aim of the Commission's broadband policy is to create "deregulatory regime," "reducing regulatory requirements and uncertainties that could have slowed development of . . . broadband services").

[143] *See supra* pp. 37-38.

may occur in the future is not a sufficient justification for imposing costly regulations on an emerging and dynamic industry.[144]

In light of the healthy state of competition in the industry today, Skype cannot meet its heavy burden of documenting market failure in the wireless industry. As explained above, today's wireless industry is competitive from top to bottom.[145] There are multiple competing national and regional carriers that are vying to attract new customers and to retain existing ones. The resulting competition has resulted in higher qualities of service, declining costs, and increasing subscribership. Competition is driving innovation in services, applications, and functionalities, as carriers compete to provide the valuable services to their subscribers.[146] Again, as Chairman Martin has emphasized, the wireless industry is "the poster child for the success of competition";[147] it is in no sense an industry that exhibits the sort of market failure that would warrant regulatory intervention by the Commission.

---

[144] *See* Jason Oxman, *The FCC and the Unregulation of the Internet*, FCC Office of Plans and Policy Working Paper No. 31, at 25 (July 1999) ("The Commission should, of course, avoid regulation based solely on speculation of a potential future problem."), *available at* http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp31.pdf; *see also* Memorandum Opinion and Order, *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc. to AT&T Corp.*, 15 FCC Rcd 9816, ¶ 128 (2000) (expressing concern about AT&T leveraging control of Excite@Home to disadvantage alternative broadband providers, but declining to impose "open access" requirement, and instead deciding to "monitor broadband developments" and to take corrective action if market failures occurred); Declaratory Ruling and Notice of Proposed Rulemaking, *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, 17 FCC Rcd 4798, ¶ 21 (2002) (observing that Excite@Home filed for bankruptcy in 2001).

[145] *See generally supra* pp. 5-12.

[146] *See supra* pp. 14-16.

[147] Memorandum Opinion and Order, *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations*, 19 FCC Rcd 21522, 21661 (2004) (Separate Statement of Commissioner Kevin J. Martin).

D. *Carterfone* Is Inapposite Because the Practices at Issue Are Necessary To Ensure Efficient Use of Wireless Networks

Aside from the fact that *Carterfone* has no application to an emerging industry that is intensely competitive, it is also inapplicable because the carrier practices identified by Skype are not, as Skype asserts (at 4), aimed at "exclud[ing] rivals." To the contrary, these practices are intended to ensure the efficient use of wireless networks and to ensure that consumers receive the kind of high-quality service on which carriers base their reputations. In this respect, they are the very types of practices that one would expect to find in a highly competitive market in which carriers vie to deliver the best possible services at the lowest possible prices.

In *Carterfone*, the Commission rejected the telephone company's claim that the Carterfone device would harm the telephone network.[148] It was on this basis that the tariff prohibition at issue operated as "'[a]n unwarranted interference with the telephone subscriber's right reasonably to use his telephone in ways which are privately beneficial without being publicly detrimental.'"[149] The flip side of that principle is that uses of a network that *are* publicly detrimental *may* be prohibited. In the *Carterfone Reconsideration Order*, the Commission explained that telephone companies "were in no [way] precluded from adopting reasonable standards to prevent harmful interconnection."[150] The Commission has consistently recognized the inapplicability of *Carterfone* where, as here, carrier practices are necessary to ensure the efficient use of the network.[151] The Commission's CPE rules make that clear,

---

[148] *See Carterfone Reconsideration Order* ¶ 4 ("no substantial effort was made on this record to demonstrate any harm from the interconnection of private mobile radio systems").

[149] *Carterfone*, 13 F.C.C.2d at 423 (quoting *Hush-A-Phone Corp. v. United States*, 238 F.2d 266, 269 (D.C. Cir. 1956)).

[150] *Carterfone Reconsideration Order* ¶ 3.

[151] *See* Second Notice of Proposed Rulemaking and Order, *Petitions Seeking Amendment of Part 68 of the Commission's Rules Concerning Connection of Telephone Equipment, Systems*

defining harm to the network to include "degradation of service to persons other than the user of the subject terminal equipment, his calling or called party."[152] The applicability of *Carterfone*, in other words, depends upon a showing that an attachment would do no harm to the network or services provided to other users.[153]

Skype cannot make that showing. The individual practices that Skype identifies are addressed in more detail below.[154] But the point for present purposes is that the purportedly "anti-competitive" practices that Skype identifies are in fact aimed at ensuring the efficient, economical, and secure use of carriers' wireless networks.

All communications networks that rely on shared resources face important issues of congestion and resource constraints, and these problems are particularly acute in the wireless industry. Wireless communications – whether voice or data – take place within assigned spectrum bands. Because each communication must occur on specific frequencies within those bands, there are physical limits on the uses a wireless network can support in any particular

---

and Protective Apparatus to the Telephone Network, 92 F.C.C.2d 1, ¶¶ 94-98 (1982) (refusing to include party line service under Part 68 because of the "potential harms such inclusion portends"); *see also Navigation Devices Order* ¶ 32 ("prescrib[ing] limitations to a subscriber's right to attach" navigation devices to an MVPD network that equipment must not "harm the MVPD networks" and noting that prescribed "harm could take any number of forms, including physical damage to the MVPD system, compromise of system security, or electronic interference to other users on the system"); *id.* ¶ 36 (adopting rules allowing MVPD providers "to establish and enforce their own reasonable standards to define harm to their facilities").

[152] 47 C.F.R. § 68.3.

[153] *See* J. Gregory Sidak, *A Consumer-Welfare Approach to Network Neutrality Regulation of the Internet*, 2 J. Competition L. & Econ. 349, 378 (2006) (noting *Hush-A-Phone* and *Carterfone* embody only a "de facto Pareto efficiency standard" – "an end-user may attach any device to the network that she likes, as long as her doing so does not degrade the value of the network for anyone else"); *see also id.* at 379 (under *Carterfone*, "the network owner has the right to refuse access to an end-user" when, among other things, attachment would "injure the public in its use of the network owner's services, or impair the operation of the network").

[154] *See infra* pp. 48-63.

geographic area.[155] Although advances in digital technologies allow carriers to increase the efficiency of wireless networks and to provide capacity for simultaneous uses, there are limits to the spectrum, which take on added significance with rising demand for wireless broadband services.[156]

In this environment, broadband subscribers lack incentives to safeguard the integrity, security, and efficient use of the wireless network as a whole. Subscribers have the incentive to use as much bandwidth as possible – for example, through continuous downloading and streaming video or using VoIP – regardless of the effect those heavy or inefficient uses have on the reliability of the network for other users. Only a wireless carrier has the incentive to control subscriber-created externalities that undermine the integrity, security, and efficient and economical use of the wireless network.[157] It is in service of that goal that the practices Skype targets are in fact pursued.

AT&T's policy of promoting the use of certified handsets, which is discussed in more detail below,[158] is a case in point. For example, through its certification process, AT&T requires that devices contain the adaptive multi-rate vocoder to improve spectral efficiency. Prevalent

---

[155] *See* AT&T Decl. ¶¶ 11-12.

[156] *See id.* ¶ 11; *see also* H. Keith Smith, VP – Development, TechnoCom Corporation, *Comparing Digital Cellular Technologies for Wide-Area Internet Access* at 3 (July 1998), *at* http://www.technocom-wireless.com/pdf/Data_WP.pdf (visited Apr. 26, 2007) ("Digital cellular systems allow multiple users to share the capacity that is typically allocated to a single user in analog cellular systems."); *FCC Discusses Secondary Markets for Wireless Spectrum*, Tech Law Journal (Nov. 10, 2000), *at* http://www.techlawjournal.com/telecom/20001110a.asp ("I believe that spectrum scarcity is the most serious challenge facing the wireless industry today, and therefore, facing consumers of wireless services today. Demand for spectrum is outstripping supply, particularly in the prime spectrum below 3 Gigahertz. And this should be a national priority for us. And it is only going to get worse, as more and more people start demanding access to these wireless web devices.") (quoting then-FCC Chairman William Kennard).

[157] *See, e.g.*, AT&T Decl. ¶ 43.

[158] *See infra* pp. 58-60.

use of handsets lacking the adaptive multi-rate vocoder would result in less efficient use of AT&T's network resources. And that, of course, would leave less spectrum available to serve everyone else. Thus, even apart from the improved service quality provided by certified handsets, AT&T has a compelling, pro-competitive justification for promoting use of such handsets: the market imperative to ensure that individual users do not compromise the service quality available to others through widespread use of uncertified handsets.

The bottom line is that wireless networks subscribers' uses can have real and substantial effects on wireless networks. For this reason as well, *Carterfone* – which was adopted in the face of insubstantial claims of wireline network harm – is an inapt regulatory model.

E. Skype's Analogies to Other Regulatory Contexts Are Misplaced

In support of its petition, Skype relies on analogies to other contexts in which, according to Skype (at 10-11), the Commission has applied some variant of *Carterfone*. None of those analogies supports Skype's call for regulation of the wireless industry.

1. Skype first points to the *Computer II* proceedings, in which, Skype says (at 10), "the Commission extended the basic principle of *Carterfone* into the market for enhanced services." Skype's reliance on *Computer II* is misplaced. The Commission has recognized that its *Computer Inquiry* obligations were predicated on the one-wire world that characterized the wireline telecommunications industry at the time of the proceedings.[159] The Supreme Court likewise has recognized that the *Computer Inquiry* obligations reflected the Commission's "concern that local telephone companies would abuse the *monopoly power* they possessed by

[159] *See Wireline Broadband Order* ¶ 21 (noting that the *Computer Inquiry* rules were first imposed "in an era far different from today in terms of the technological, marketplace, and regulatory environment for telecommunications carriers").

virtue of the '*bottleneck*' local telephone facilities they owned."[160] As explained in detail, the wireless industry is characterized by multiple facilities-based providers that vigorously compete with one another. The *Computer II* precedent, like *Carterfone*, therefore has no application to the wireless industry.[161] Indeed, we are aware of no decision – in the approximately four-decade history of *Computer Inquiry* proceedings – in which the Commission applied the obligations established in those proceedings to wireless carriers. It should not start here.

Moreover, contrary to Skype's suggestion, the Commission's discussion of *Carterfone* in *Computer II* was not aimed at justifying regulation, but rather *de*regulation. As the Commission put it, "[i]n weighing the merits of [its] conclusion" to detarrif telephone companies' sale of CPE, the Commission took notice of the competitive state of the CPE market, which had been spurred by the Commission's *Carterfone* decision.[162] Far from supporting Skype's call for regulation of the wireless CPE market, as Skype asserts, the portions of the *Computer II Order* Skype cites reflect the Commission's refusal to impose CPE tariff regulations on telephone companies in light of the competitive environment. The Commission reasoned that "[c]ontinued regulation of CPE will not foster a competitive equipment environment" and that regulation should be employed only as "a substitute for deficiencies in the marketplace," which was already competitive.[163] Applied here, that reasoning compels rejection of Skype's claim.

---

[160] *National Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 996 (2005) (emphases added).

[161] *See supra* pp. 27-29.

[162] *See* Final Decision, *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, 77 F.C.C.2d 384, ¶ 141 (1980) ("*Computer II Order*").

[163] *Id.* ¶ 145. Although the Commission did conclude in *Computer II* that bundling of CPE with transmission services might restrict consumers' "freedom of choice," *id.* ¶ 149, the Commission was justifying its decision to *de*regulate (by detariffing) CPE, and the Commission grounded its skepticism of bundling in antitrust principles, not *Carterfone*. *See id.* ¶¶ 149-150. More importantly, the Commission's discussion of bundling was limited to the competitive

2. Skype's comparison (at 11) to Congress's treatment of set-top boxes in the multichannel video programming distribution ("MVPD") market is also unavailing. Congress adopted the set-top box provisions in the 1996 Act because of the dearth of competition in the primary MVPD market, as well as the adjacent CPE market. Paralleling the circumstances prompting *Carterfone*, the set-top box rules were adopted for an industry in which cable companies lease, rather than sell, set-top boxes to consumers and at a time when cable companies offered minimal variety in functionalities and features to consumers. The text of the Act makes clear that the rules depended upon the want of competition. Congress mandated that the Commission's rules must sunset when, among other things, "the market for the multichannel video programming distributors is fully competitive," and when the adjacent "market for converter boxes, and interactive communications equipment, . . . is fully competitive."[164] As the Commission has explained, "the overarching goal of [the Commission's set-top box rules] was to assure competition in the availability of set-top boxes and other [CPE]."[165]

Given the competitive state of the wireless industry today, those rules are of no help to Skype here. In fact, those rules support AT&T's position: where competition is working and

---

context of the time, as it acknowledged that, "[i]f the markets for the components of the commodity bundle are workably competitive, bundling may present no major societal problems." *Id.* ¶ 149 n.52. In the *CPE Bundling Order*, the Commission determined that bundling of wireless CPE and services was not anticompetitive. *See* Report and Order, *Policy and Rules Concerning the Interstate, Interexchange Marketplace; Implementation of Section 254(g) of the Communications Act of 1934, as amended; 1998 Biennial Regulatory Review – Review of Customer Premises Equipment and Enhanced Services Unbundling Rules in the Interexchange, Exchange Access and Local Exchange Markets*, 16 FCC Rcd 7418, ¶ 9 (2001).

[164] 47 U.S.C. § 549(e); *see also Navigation Devices Order* ¶ 107 (Section 549(e) "establishes the premise that when the markets for programming distributors and equipment encompassed by [§ 529] are fully competitive, consistent with the public interest, the regulations implementing [§ 529] are no longer needed").

[165] *Navigation Devices Order* ¶ 7; *see also id.* ¶ 13 (noting that the rules are aimed at "facilitat[ing] the emergence of a competitive marketplace for navigation equipment").

there is no market failure, regulation is unnecessary. Beyond that, the explicit statutory authority in the set-top box context is in stark contrast with Congress's express direction, described above, *not* to regulate in the broadband or wireless contexts.[166] That statutory juxtaposition further undermines Skype's reliance on the Commission's set-top box rules.

3. Finally, Skype's attempt to draw an analogy (at 24-25) to the Commission's rules regarding wireless number portability is also inapt. In adopting number portability rules, the Commission identified industry characteristics that, in its view, inhibited the industry from implementing number portability on its own. The Commission first found that the industry as a *whole* would not voluntarily adopt number portability because some carriers derived a competitive advantage from the lack of number portability.[167] The Commission further found that even carriers that might otherwise prefer to adopt number portability to respond to consumers' preferences would not likely adopt such policies absent collective action because, "absent the implementation of full [number portability] by other wireless carriers, that carrier could not gain any new wireless customers from the non-participating wireless carriers."[168] In view of those unique industry conditions and incentives, the Commission deemed regulation appropriate.

---

[166] *See* 47 U.S.C. § 332(a)(3); *id.* § 230(b)(2); 1996 Act § 706(a), 110 Stat. 153, reprinted at 47 U.S.C. § 157 note.

[167] *See* Memorandum Opinion and Order, *Verizon Wireless's Petition for Partial Forbearance from the Commercial Mobile Radio Services Number Portability Obligation*, 17 FCC Rcd 14972, ¶ 21 (2002).

[168] *Id.*; *see also* Memorandum Opinion and Order, *Cellular Telecommunications Industry Association's Petition for Forbearance From Commercial Mobile Radio Services Number Portability Obligations*, 14 FCC Rcd 3092, ¶ 41 (1999) ("In order for a wireless customer to switch wireless carriers while retaining its phone number, both carriers must have implemented LNP. If certain carriers conclude that they will sustain a net loss in customers overall under a LNP scenario, they will have little, if any, incentive to implement LNP in the absence of a requirement.").

Just the opposite is the case here: to the extent consumers demand functionalities and applications that Skype anticipates consumers will want, there is every market incentive for any individual wireless carrier to provide them. There is no comparable limitation here that prevents carriers from adopting the practices that Skype discusses.[169] In fact, as explained, the competitive state of the wireless industry drives carriers – even a carrier acting alone – to offer applications that consumers want and that are compatible with carriers' networks.[170] The industry conditions at issue here therefore bear no resemblance to those that prompted number portability rules.

II. THE COMMISSION SHOULD REJECT SKYPE'S REQUEST TO INITIATE A RULEMAKING PROCEEDING

In addition to its request for a declaration that *Carterfone* applies to the wireless industry, Skype asks the Commission to initiate a rulemaking proceeding to determine whether various practices of wireless carriers are consistent with *Carterfone*. The Commission should deny Skype's request. Indeed, far from demonstrating a need for regulatory intervention, the isolated practices that Skype identifies – once stripped of Skype's misleading descriptions – confirm that the market is working.

A. The Practices Identified by Skype Do Not Warrant Regulatory Intervention

1. The Nokia E61 and WiFi Functionality

Skype first argues (at 14) that a "clear example" of a practice that warrants Commission intervention is handset "crippl[ing]," in particular, AT&T's decision to sell the Nokia E62, rather than the Nokia E61, smartphone. According to Skype (at 14), AT&T elected to sell the E62,

[169] Skype suggests that carriers share an incentive to foreclose competition from certain applications. For reasons stated above, that charge is unfounded: carriers share an incentive to provide applications that consumers demand, and in a competitive market consumer demand, not anticompetitive aims, dictates market practices. *See supra* pp. 30-31.

[170] *See supra* pp. 31-32.

rather than the E61, because AT&T wanted a handset stripped of WiFi functionality to avoid competition from VoIP.[171] Skype's unsubstantiated charge is grossly misinformed.

The Nokia E61 was designed to be sold as a high-end handset to professionals in Europe.[172] In the efforts that led to the E62, AT&T, by contrast, was looking for a smartphone that would have a wider appeal in U.S. markets.[173] In working with Nokia to develop a smartphone for the domestic market, AT&T wanted – as part of its "email for everyone" strategy – a low-cost handset with email capability, something that could compete generally with the Blackberry but also appeal to mass market as well as business customers.[174]

The Nokia E62 – which the very article Skype relies upon describes as "spectacular" and quite possibly "the best smartphone around"[175] – was the result of that collaboration. In AT&T's judgment, the E62 had the right functionalities – *e.g.*, basic email capabilities and a QWERTY keyboard – at the right cost. The E61, by contrast, includes costly functionalities – such as high-speed UMTS capability, but only on the 2100 MHz frequency band used in Europe – that did not have mass-market appeal in the United States. Indeed, the retail cost of the E61 would have been between $400-500 per unit.[176] The current cost of the Nokia E62 is far below that: AT&T

---

[171] *Id.*

[172] *See* B. Cha, *Nokia E61 CNET Editors' Review*, *at* http://reviews.cnet.com/Nokia_E61/4505-6452_7-31556318.html?tag=prod.txt.1 (visited Apr. 26, 2007) ("Though it has its similarities to the Motorola Q and BlackBerrys (slim design, full QWERTY keyboard), the E61 is definitely best suited for the corporate user who needs a fully loaded device for working on the road. Unfortunately, you'll pay for all that functionality.").

[173] *See* AT&T Decl. ¶ 27.

[174] *See id.*

[175] Gary Krakow, *The Nokia E62: The Best Smartphone Ever?* (Aug. 24, 2006), *available at* http://www.msnbc.msn.com/id/14456766/.

[176] *See* AT&T Decl. ¶ 30.

now offers the E62, with a two-year service plan and online rebate, for the price of $69.99.[177] In short, in AT&T's judgment, the Nokia E62 was better suited for the market segments AT&T wanted to target; AT&T's decision was not based on any desire to "cripple" WiFi for anticompetitive reasons.

Moreover, contrary to Skype's irresponsible suggestion (at 14), AT&T sells a range of handsets with WiFi functionality, including the Cingular 8525, Cingular 8125, and iPAQ products.[178] Indeed, AT&T's portfolio of dual-mode devices with WiFi access is only expanding.[179] That is consistent with overall market trends, as "[o]ver 80 cellphones now come with Wi-Fi access built in."[180]

To be sure, not *every* wireless handset has WiFi functionality. But that is hardly surprising. WiFi, like other functionalities, is not cost-free. Currently, WiFi functionality adds to the expense of handsets and is taxing on battery life.[181] Those constraints affect consumer demand. As one analyst explained, "lengthy battery life has long been one of the main purchasing criteria for mass-market handset owners" and "an inability to meet this basic need reflects badly on the handset brand."[182] In deciding whether to offer a handset with WiFi functionality, AT&T must therefore carefully balance the advantages of WiFi, intensity of

---

[177] *See* http://www.cingular.com/cell-phone-service/cell-phones/pda-phones-smartphones.jsp (visited Apr. 26, 2007).

[178] *See* AT&T Decl. ¶ 31.

[179] *See id.*

[180] *A Look at Mobile Devices* at R4.

[181] *See* AT&T Decl. ¶ 31; *see also* Neil Mawston & Chris Ambrosio, StrategyAnalytics, *Enabling Technologies: T1, Marvell and Broadcom Drive WiFi into 3G Handsets* at 6 (Dec. 2006) ("*Enabling Technologies*") (noting that "high costs" and "heavy power-consumption" are affecting WiFi availability on handsets).

[182] *Enabling Technologies* at 6.

consumers' preferences, and costs.[183] AT&T strikes that balance by selling some handsets with WiFi and some without. Contrary to Skype's claim, that AT&T elected to sell the E62 without WiFi is hardly grounds for a Commission investigation of the wireless industry.

2. Bluetooth

Skype also contends (at 14-15) that wireless carriers engage in "restrictive practices" such as disabling "Bluetooth data transfer functionality." Skype posits (at 15) that this supposed practice is aimed at forcing consumers "to use the carrier's paid services instead of utilizing Bluetooth to accomplish the same goals." Skype is again mistaken.

To begin with, Skype's assumption that wireless carriers can simply ignore consumer preferences is at odds with the intense competition in the industry. As a result of that competition, all carriers, including AT&T, must strive to deliver to consumers the functionalities and applications they want, consistent with capacity constraints and the overarching need to ensure high-quality service. In that regard, certain functionalities and applications can affect the cost and functioning of the handset, and thereby affect consumers' desire to purchase the handset. Those costs may lead different wireless carriers to adopt differing practices with respect to particular functionalities and applications.

Bluetooth is no exception. As evidence of a well-functioning industry, carriers' practices with respect to Bluetooth vary substantially. While Skype's petition is intended to suggest that all carriers disable Bluetooth, AT&T, for one, does not do so.[184] AT&T has adopted a business model that encourages consumers to "sideload" content – *i.e.*, to transfer content directly between a PC and a handset – through, among other means, Bluetooth.[185] By the end of the first

[183] *See* AT&T Decl. ¶ 26.

[184] *See id.* ¶ 32.

[185] *See id.*

half of 2007, more than 80% of AT&T's wireless handsets will be Bluetooth-enabled and many of those handsets will enable sideloading.[186]

At the same time, however, Bluetooth, if implemented incorrectly, also poses certain security and privacy concerns. In 2005, for example, hundreds of Cingular wireless handsets were infected by the "CommWarrior virus," which was spread in part through Bluetooth and which had the potential to multiply and to run-up substantial charges without the knowledge of the subscriber.[187] Had Cingular not responded quickly, the virus could have infected more than a hundred thousand handsets.[188] There are also documented privacy issues raised by Bluetooth, especially the practice of "bluejacking" wireless handsets – *i.e.*, surreptitiously obtaining the personal information stored on a consumer's handset via a Bluetooth port.[189] Carriers have every incentive to contain these threats and are working hard to address the security issues that Bluetooth can pose for wireless subscribers. Given those security threats, however, carriers may have valid reasons for limiting Bluetooth uses.

3. Usage Policies

Skype also complains that wireless carriers are "prohibit[ing] the use of 3G service for VoIP applications such as Skype."[190] Skype asserts that these restrictions "are designed to

---

[186] *See id.* ¶ 33.

[187] *See id.* ¶ 34.

[188] *See id.*

[189] *See id.* ¶ 35; John Markoff & Laura M. Holson, *An Oscar Surprise: Vulnerable Phones*, N.Y. Times, Mar. 2, 2005, at E7, 2005 WLNR 3136273 (recounting a test run at the 2005 Oscars that showed that as many as 100 Oscar attendees had wireless handsets with information that could be siphoned via Bluetooth, which is the same tactic that resulted in Paris Hilton's cell phone list appearing on the Internet).

[190] Pet. at 18.

prevent the use of applications and services for *competitive reasons*."[191] In fact, carriers' usage restrictions reflect sound principles of network management.

AT&T's build-out of its network is based on assumptions regarding consumer usage.[192] A basic assumption, for example, is that most consumers want to use their handsets for services that are optimized for mobile use – including voice service, text-messaging, email access, and limited web-browsing.[193] The capacity AT&T builds into its network, as well as the rates that AT&T charges in its pricing plans, are based on that assumption.

Similarly, AT&T must adopt network policies that account for the finite and shared nature of the wireless spectrum.[194] Because wireless spectrum is limited, AT&T has a responsibility to ensure reliable and high-quality service for all users.

AT&T's usage policies are attempts to address those important concerns. AT&T has adopted usage policies aimed at limiting the use of bandwidth-inefficient applications – *i.e.*, applications that are not optimized for the wireless environment. Such applications consume a disproportionate amount of bandwidth and therefore may affect the quality and reliability of use by other subscribers in the same geographic area.[195] Widespread use of such applications would limit the number of subscribers that AT&T could serve in any geographic area.[196]

AT&T thus restricts the use of services and applications that consume excessive and/or disproportionate bandwidth. Such uses include web camera broadcasts, continuous JPEG file transfers, telemetry applications, and private line backup services (AT&T offers separate service

---

[191] *Id.* at 19 (emphasis added).

[192] *See* AT&T Decl. ¶ 46.

[193] *See id.*

[194] *See id.* ¶ 12.

[195] *See id.* ¶ 47.

[196] *See id.*

plans for some restricted uses, such as telemetry and private line backup services).[197] For the same reasons, AT&T restricts the use of VoIP.

VoIP as it is currently implemented in the fixed IP network is an inefficient application, which is not optimized for wireless network usage.[198] By contrast, the circuit-switched voice service AT&T provides is optimized for the wireless environment. Indeed, AT&T has carefully designed its network to provide optimized circuit switched voice service, maximizing scale and cost efficiencies. Because VoIP is not optimized for the wireless environment, carrying VoIP calls over the wireless data network consumes substantially more bandwidth than a circuit-switched voice call on the same UMTS/HDSPA network, without any commensurate improvement in quality.[199] If widely used, VoIP would thus consume a disproportionate amount of AT&T's spectrum, and therefore risk limiting AT&T's ability to provide consumers the services that are truly unique – *i.e.*, the innovative applications that will continue to drive wireless broadband penetration. Absent a demonstrated consumer preference for VoIP – which has not manifested itself in the marketplace – there is simply no customer-driven basis for AT&T to take that risk.

---

[197] *See id.* ¶ 45. In AT&T's experience to date, alternatives to a categorical approach – such as relying upon per-megabyte payment options or aggregate caps (without usage restrictions) – have not proven to be commercially practicable, as they are expensive to implement and consumers are unfamiliar with calculating megabyte usage and demand monthly packages. *See id.* ¶ 48. In addition, such approaches are not responsive to the fact that the problems presented by such applications are not simply tied to aggregate use, but also to the intensity of use. *See id.* ¶ 49.

[198] *See id.* ¶ 50.

[199] *See id.*; *see also* Peter Rysavy, *VOIP Over Wide-Area Wireless: A Tricky Proposition*, Unstrung (May 25, 2006), *at* http://www.rysavy.com/cols.html#US_2006_05_25 (noting that, until technological issues with VoIP are addressed, "any VOIP usage will be of significantly lower quality, and will consume far more bandwidth than existing voice services").

In addition, VoIP applications could be written without regard to bandwith utilization, and in fact in some business models, third parties may have an incentive to write VoIP applications that attempt to obtain higher quality voice at the expense of other users (for example, by sending each packet multiple times to ensure delivery in the face of congestion). Such applications would clearly affect the service received by other users.[200]

In short, AT&T's usage policies, contrary to Skype's charge, are driven by sound network management principles, not, as Skype speculates, anticompetitive discrimination. Indeed, Skype points to *no* evidence supporting its claim of anticompetitive discrimination, nor does it attempt to reconcile that claim with the fact that, far from singling out VoIP, AT&T's usage policies restrict other uses such as continuous JPEG file transfers and machine-to-machine applications. As the D.C. Circuit recently observed, the Commission cannot adopt a costly regulatory regime on the basis of speculation and in the absence of concrete evidence of harm.[201] And, like other aspects of the wireless industry, if AT&T strikes the wrong balance in its usage policies – adopting policies that are too permissive and that undermine the quality and reliability of its network, or usage policies that are too strict and that inhibit popular uses – market forces will provide the remedy.

---

[200] For these reasons, and because a VoIP application would necessarily require access to network resources, it would raise security and functionality issues and would thus be subject to the application "signing" process discussed further below, *see infra* pp. 60-63.

Use of GSM voice as opposed to VoIP also affects engineering aspects of the network because wireless handsets can use different frequencies for voice and data sessions. AT&T is currently pursuing various network management strategies to optimize service for its customers by making more bandwidth available for broadband data applications by shifting voice traffic to non-broadband frequencies.

[201] *See National Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 843 (D.C. Cir. 2006) (holding that "[p]rofessing that an order ameliorates a real industry problem but then citing no evidence demonstrating that there is in fact an industry problem is not reasoned decisionmaking," and vacating order where there was "*zero* evidence of actual abuse")

B. AT&T's Wireless Practices Are Sound Efforts To Deliver Products and Services that Consumers Want While Ensuring Efficient Network Use

1. Locked Wireless Handsets

Skype also takes aim at what it describes (at 16) as carriers' "common practice" of "locking . . . handsets so that they may not be used on any network." Skype contends (*id.*) that "[l]ocking handsets acts as a barrier for consumers who may wish to switch carriers" and may result in unwanted equipment purchases by consumers who might otherwise prefer to keep their old handset. Skype's claims regarding handset locking are unfounded.[202]

To begin with, Skype, once again, has its facts wrong. To encourage subscribership, AT&T, like most wireless carriers, absorbs a significant amount of the considerable cost of wireless handsets in return for a service commitment and accordingly locks the consumer's handset for the duration of the commitment (and to deter theft) or until the consumer's contractual obligation is fulfilled. After that obligation is fulfilled, however, AT&T allows a consumer to unlock a handset at the consumer's request if the handset supplier permits and has provided AT&T with this capability.[203]

In addition, AT&T sells handsets without service plans and unlocks those handsets upon a customer's request if the supplier permits and has provided AT&T with this capability.[204] Consumers therefore have a choice. Most consumers understandably choose the discount that

[202] Skype provides no evidence to support its claim (at 16) that consumers have "no idea" what a phone lock is. Information on unlocking handsets is widely available on the Internet. In any event, the logical remedy to that issue is hardly, as Skype insists, the adoption of a comprehensive regulatory regime for the wireless industry.

[203] *See* AT&T Decl. ¶ 15.

[204] *See id.* ¶ 17.

comes with a service commitment, which entails use of a locked handset for some period of time.[205] That consumers are making that choice, however, is hardly evidence of a market failure.

Skype's suggestion (at 16) that locking acts as a barrier to consumers switching wireless carriers is also unsupported. The federal court in *Wireless Antitrust Litigation*, on a substantial record, rejected just this claim. The court reasoned that "statistics compiled by the FCC show, whatever attempts the defendants have made to address churn [through handset locking], those efforts have been to a significant degree futile."[206] Apart from the churn rate, the court explained that wireless carriers' "subsidization of handset costs, which they use to lure new customers, undercuts the degree to which a locking mechanism will dissuade a consumer from switching service providers."[207] The court's finding on these points is consistent with the Commission's finding in the *Eleventh Competition Report* that "[c]onsumers continue to pressure carriers to compete on price and other terms and conditions of service by freely switching providers in response to differences in the cost and quality of service."[208]

Finally, it is worth noting that the interoperability described by Skype (at 17) in Europe would not exist in the United States with or without handset locking. Wireless networks in the United States use many different technologies, including TDMA, CDMA, GSM, UMTS, and iDEN.[209] These technologies are not compatible; as Skype acknowledges (at 16 n.28), a handset

---

[205] *See id.*

[206] 385 F. Supp. 2d at 430; *see also id.* at 412 (citing and discussing Commission statistics showing an aggregate churn rate of "between 18 and 36 percent of customers each year").

[207] *Id.* at 430.

[208] *Eleventh Competition Report* ¶ 4.

[209] In addition, in Europe, all service is on the 900 and 1900 MHz bands; in the United States, there are many frequency bands in use for wireless services, which makes interoperability less feasible.

designed for use with one technology cannot be used on a network employing a different technology. European networks, by contrast, use exclusively GSM technology. Far from evidencing a market failure, the Commission has concluded that the absence of a single technology standard in the United States has had "several pro-competitive advantages over standardization," including "greater product variety and greater differentiation of services offered by carriers using different technologies."[210] Nothing in Skype's conclusory assertions calls the Commission's expert judgment into question.

2. Certification Policies

Skype also questions (at 19-20, 30-32) handset and application certification processes. Those processes are an important part of wireless carriers' ongoing efforts to maintain the integrity, security, and efficiency of wireless networks.

a. As noted at the outset, one of AT&T's central business strategies is to provide customers with a high-quality end-to-end service experience. AT&T's handset certification policy is critical to that strategy because it is the process through which AT&T ensures that handsets used on its network do not utilize excessive spectrum and are compatible with and optimized for use on its wireless network.[211]

Handset certification serves several ends. The overarching goal of certification is to promote interoperability and integration between wireless devices and wireless networks, thereby providing the best quality service for the individual subscriber without jeopardizing the service of others.[212] Unlike other wireless carriers, AT&T uses a number of GSM and UMTS network suppliers, which makes certification all the more important to ensure that a handset

[210] *Eleventh Competition Report* ¶ 103.

[211] *See* AT&T Decl. ¶¶ 18-19.

[212] *See id.* ¶ 19.

interoperates with each of the networks that AT&T uses.[213] Certification is also an important mechanism for identifying and remedying security vulnerabilities in handsets,[214] which are increasing concerns as handsets come with greater functionality.[215]

AT&T's certification policies also promote spectral efficiency through a variety of measures explained in the attached declaration. For example, to be certified for use on AT&T's network, a handset must be equipped with an adaptive multi-rate vocoder ("AMR"). The AMR vocoder adapts to varying signal quality conditions using more bandwidth when the signal is strong and using less bandwidth with additional bit error and dropout corrections to provide higher quality when the available signal strength is low. This permits more callers to share a given amount of bandwidth at a higher average voice quality. This functionality results in clearer, higher-quality service to the end user, and it also minimizes the amount of spectrum used by that end user and thus helps to ensure that AT&T can provide high-quality service to other end users as well.[216]

In addition, AT&T's certification policies enable AT&T to equip handsets with functionalities enabled by AT&T's services.[217] Without certification, a subscriber will not be guaranteed the same experience or the ability to use certain data and voice services, including

---

[213] *See id.* ¶ 21.

[214] *See id.* ¶ 19.

[215] *See* Alexander Gostev, *Kapersky Security Bulletin 2006: Mobile Malware* (Feb. 27, 2007) (finding that threat from viruses will increase as "more and more new functions will lead to more people using smartphones the way people use their personal computers today," which will "draw the attention of cybercriminals and ultimately lead to an increase in the number of Trojan programs for mobile phones").

[216] *See* AT&T Decl. ¶ 22.

[217] *See id.* ¶ 23.

instant messaging, AT&T Video, and Push to Talk. Similarly, many handset functions, such as the Message Waiting Indicator, may not function properly absent certification.[218]

For those reasons, although AT&T does not prohibit the use of uncertified handsets, AT&T strongly encourages its customers to use certified handsets – those that are optimized for its network – and it guarantees the service of and provides technical support only for those handsets.[219] Because AT&T's certification policies reflect the company's efforts to ensure that users enjoy high-quality, integrated wireless services, there is no basis for concluding that this practice is anticompetitive. To the contrary, it is part and parcel of delivering the best possible service to customers in a robustly competitive industry.

b. AT&T's application certification procedures also reflect sound principles of network management.

As explained, AT&T only requires the certification of applications that affect AT&T's network or that require access to a subscriber's information. AT&T's certification procedures are a way of addressing threats to the network by granting applications different levels of access to the handset and the network.[220] AT&T's application certification policies reflect a sliding scale of access: the greater the confidence AT&T has in the safety and reliability of the application, the greater the access to handset and network resources.[221]

There is no plausible basis for finding an anticompetitive motive in AT&T's application policies. AT&T stands only to benefit from an increasing variety of applications that are compatible with its services, as such applications make wireless services more appealing to

---

[218] *See id.*

[219] *See id.* ¶ 24.

[220] *See id.* ¶¶ 38, 40.

[221] *See id.* ¶ 40.

consumers.[222] Lucrative business customers, for example, are increasingly using wireless handsets to perform various functions, including accessing patient medical records, managing inventories, and closing sales.[223] Wireless carriers that adopt overly restrictive policies with respect to applications will lose access to these lucrative markets. Carriers therefore have the appropriate incentives to ensure that their handsets can run all safe and efficient applications. And, because AT&T does not generally write its own applications, there is no competitive reason for AT&T to thwart application development.

At the same time, there can be no serious question that AT&T's application certification policies are crucial to management of AT&T's wireless network. A wireless handset that is "infected" by a malicious application could, among other things, send messages and incur charges without the handset owner knowing, create congestion on the network, and drain handset batteries.[224] Those costs, which are imposed both on the subscriber and on the network as a whole, affect consumers' perceptions of the quality, privacy, security, and reliability of AT&T's service.[225] Indeed, given the market imperative to protect consumers' privacy, AT&T would face substantial competitive harm if it did not safeguard the privacy and security of its handsets.

None of this should be news to Skype, which has its own "Software Certification" procedure for software add-ons to its application that is aimed at "quality assurance."[226] Skype has developed comprehensive and detailed testing procedures for various classes of these

---

[222] *See id.* ¶ 37.

[223] *See* Jessica E. Vascellaro, *Businesses Are Finding All Sorts of New Uses for Mobile Devices*, Wall St. J., Mar. 26, 2007, at R5; *see also id.* ("mobile hardware and software makers expect demand from businesses to continue to grow," and software providers are working "to create more enterprise services that work with their operating systems").

[224] *See* AT&T Decl. ¶ 42.

[225] *See id.*

[226] *See* https://developer.skype.com/Certification/Software (visited Apr. 26, 2007).

software add-ons.[227] Skype's testing procedures are more evidence that certification is a necessary tool for managing security risks and for providing high-quality and reliable service.

AT&T's concern with threats posed by unapproved applications is far from speculative. VoIP applications represent just one example of the type of security risks that applications can create for wireless networks. "[A] plethora of security issues are associated with the still-evolving VOIP technology."[228] Those security concerns are only heightened when VoIP is provided on wireless handsets.[229] A recent Trojan Horse virus, for example, was designed for and targeted specifically at Skype users. The virus gave the attacker complete control of the computer on which Skype was running, allowing the attacker to send messages to contacts found on the computer, further propagating the virus.[230] Indeed, Skype itself has acknowledged the importance of maintaining security, and it has adopted closed network practices toward that end, explaining that such practices are necessary "to protect the integrity of the network."[231]

---

[227] *See* https://developer.skype.com/Certification/Software/TestSpecs (visited Apr. 26, 2007).

[228] D. Richard Kuhn, *et al.*, National Institute of Standards and Technology, *Security Considerations for Voice Over IP Systems* at 10 (Jan. 2005); *see also id.* App. A (listing security risks, threats, and vulnerabilities from VoIP).

[229] *See id.* at 14 (noting that "[w]ireless VOIP products may present additional challenges if certain security issues are not carefully addressed").

[230] *See* J. Evers, *Trojan Horse Targets Skype Users*, ZDNet News (Mar. 23, 2007), *at* http://news.zdnet.com/2100-1009_22-6169973.html (describing the virus); *see also* Websense Security Labs, *Malicious Website/Malicious Code: New Warezov Spreading via Skype* (Mar. 22, 2007), *at* http://www.websense.com/securitylabs/alerts/alert.php?AlertID=757 (describing "malicious code" that "is currently spreading through the Skype network").

[231] Statement of Niklas Zennström, founder and CEO of Skype (discussion at Video on the Net Conference, Mar. 19-22, 2007) (57:00-58:40), *available at* http://www.tvworldwide.com/events/videoonthenet/070319/default.cfm?id=8038&type= wmhigh (visited Apr. 26, 2007).

Wireless security threats, moreover, are not unique to VoIP applications. Research suggests that there have been more than 400 mobile device viruses created in the last 2 years.[232] The risk of viruses becomes even greater as wireless handsets become more advanced, creating more targets for viruses and affording viruses different vectors for infection.[233] In this setting, reasonable application certification policies are crucial to protecting the security of wireless networks. And, because the wireless industry is competitive, any wireless carrier that overprotects against those risks will face the competitive discipline of the market. There is no basis for assuming that regulation, especially in this dynamic and rapidly changing industry, will strike a better balance between application functionality and security than the marketplace.

CONCLUSION

Skype's request for a declaratory ruling that *Carterfone* should be applied to the wireless industry should be denied. The Commission should also deny Skype's request to initiate a rulemaking proceeding to investigate certain practices in the wireless industry.

[232] *See* Communications Daily (Mar. 22, 2007).

[233] *See id.*

Respectfully submitted,

/s/ Colin S. Stretch

Michael P. Goggin
Jack Zinman
Gary L. Phillips
Paul K. Mancini
AT&T INC.
1120 20th Street, N.W.
Washington, D.C. 20036
(202) 457-3053

Colin S. Stretch
Kelly P. Dunbar
KELLOGG, HUBER, HANSEN,
TODD, EVANS & FIGEL, P.L.L.C.
Sumner Square
1615 M Street, N.W., Suite 400
Washington, D.C. 20036
(202) 326-7900

Counsel for AT&T Inc.

April 30, 2007

APPENDIX A

Wireless Carriers Make Extensive Use of Third-Party Applications and Content		
Carrier	**Third-Party Application/Content Provider(s)**	**Application/Content**
AT&T	Good Technology	Mobile messaging platform for use with Microsoft Exchange, Lotus Domino, and other enterprise systems
AT&T	TeleNav	GPS navigation system
AT&T	Microsoft	Windows Media DRM to allow for subscription music service
AT&T	Corrigo, Inc.	Field services solutions for enterprises
AT&T	Melodeo, Inc.	Mobile podcast service
AT&T	Ryder System, Inc. & Teletrac	Advanced onboard telematics technology
AT&T	Neopets.com & IN-FUSIO	Neopets mobile software
AT&T	Crisp Wireless & the mLogic Platform	Mobile portal for NCAA March Madness
AT&T	RealNetworks' Helix OnlineTV	Platform for mobile video
AT&T	Yahoo!	Mobile access to Yahoo! services
AT&T	InfoSpace Inc.	Wireless Internet access platform
AT&T	MobiTV, Inc.	Mobile radio service
AT&T	AOL, MSN, Yahoo!	Mobile e-mail and instant messaging
AT&T	GeoLogic Solutions	Mobile communications and fleet management system
AT&T	Lucent Technologies	IP multimedia subsystem for voice, video, data and multimedia services
AT&T	Sendia Corporation	Workspace CRM application (salesforce.com)
AT&T	BIO-key International, Inc.	Enables field access to National Crime Information Center and other critical data
AT&T	America Online, Inc.	Access to AOL's mobile portal, Instant Pictures, and You've Got Pictures services
AT&T	Motricity	Mobile content distribution platform
Verizon Wireless	TiVo	TiVo mobile scheduling application
Verizon Wireless	MediaFLO USA (Qualcomm)	Mobile video platform
Verizon Wireless	Smith Micro Software, Inc.	Mobile music platform
Verizon Wireless	PacketVideo	Mobile music-on-demand platform
Verizon Wireless	Networks in Motion	Real-time GPS navigation service
Verizon Wireless	The Weather Channel	Mobile weather information service
Verizon Wireless	SkyZone Entertainment, Inc.	Gaming applications
Verizon Wireless	Bones in Motion	Mobile running tracking application
Verizon Wireless	Sonic Branding Solutions	Ring tone creation application
Verizon Wireless	Medio Systems, Inc.	Mobile search application
Verizon Wireless	MobileGates	Mobile cheap fuel finder application
Verizon Wireless	Electronic Arts	Mobile version of The Sims game

Verizon Wireless	MedAptus	Mobile patient data application for health care professionals
Verizon Wireless	Microsoft	Windows Media DRM, Windows Media Audio Professional codec, and Windows Media Transfer Protocol
Verizon Wireless	Wireless Services Corporation	iTXT enterprise message service
Verizon Wireless	Handmark	ZAGAT TO GO Mobile restaurant/entertainment guides
Verizon Wireless	VOCEL & Prima Games	Mobile strategy gaming application
Verizon Wireless	uclick mobile & m-Qube	Mobile daily comic strips
Verizon Wireless	OAG	Mobile travel application
Verizon Wireless	MobileGates	Suite of mobile travel applications
Verizon Wireless	Cutlass	Mobile fortune cookies and pet albums
Verizon Wireless	Uclick & Skava	Mobile version of Soduku
Verizon Wireless	Lucent Technologies	Mobile ring-back tones application
Verizon Wireless	FUN Technologies PLC	Mobile SkillJam arcade gaming application
Verizon Wireless	Kayak Interactive	Mobile poker gaming application
Verizon Wireless	THQ Wireless Inc.	Mobile gaming application
Verizon Wireless	Reaxion Corporation	Mobile gaming application
Verizon Wireless	Cosmic Infinity Inc. & Buena Vista Television	Mobile gaming application
Verizon Wireless	Electronic Arts	Mobile gaming applications
Verizon Wireless	Intercasting Corporation	Mobile blogging application
Verizon Wireless	Glu Mobile	Mobile gaming application
Verizon Wireless	ECONZ Wireless	Mobile timesheet application
Verizon Wireless	Dwango Wireless	Mobile gaming application
Verizon Wireless	IN-FUSIO	Mobile gaming application
Verizon Wireless	Gameloft	Mobile gaming application
Verizon Wireless	Bridgewater Systems	Platform for centralized management of authentication and authorization of users
Verizon Wireless	Vindigo & Sporting News	Mobile fantasy sports application
Verizon Wireless	Digital Chocolate	Mobile gaming application
Verizon Wireless	JAMDAT Mobile Inc.	Mobile gaming application
Verizon Wireless	Infospace & First Star Software	Mobile gaming application
Verizon Wireless	Intellisync & Rockliffe, Inc.	Mobile Eudora e-mail client
Verizon Wireless	Square Enix	Mobile gaming application
Verizon Wireless	Tecmo Mobile	Mobile gaming application
Verizon Wireless	Callaway Golf	Mobile golf information (scoring, etc.) application
Verizon Wireless	Microsoft, PacketVideo, & thePlatform for Media Inc.	Mobile video platform
Sprint	Everyday Wireless	GPS-based school bus tracking technology

Sprint	Microsoft	Mobile version of Windows Live search
Sprint	Qualcomm	Qchat push-to-talk service for Sprint phones
Sprint	IMG Media & mSpot	Mobile video programming platform
Sprint	Rave Wireless	Comprehensive suite of mobile applications for college campuses
Sprint	Smarter Agent	Mobile location-aware real estate information application
Sprint	AirG	Mobile social networking application for gamers
Sprint	Motricity	Mobile gaming platform
Sprint	WaveMarket Inc.	Mobile location-based application for locating and tracking children
Sprint	Infospace Inc.	Mobile location-based map and information application
Sprint	Associated Press	Mobile application for reporters to file video over Sprint PowerVision network
Sprint	Global Care Quest Inc.	Mobile Integrated Clinical Information System for use by healthcare providers
Sprint	Kangaroo.TV	At-track wireless application for NASCAR fans
Sprint	Bones in Motion	Real-time, GPS-enabled activity tracking application for athletes
Sprint	MSpot	Mobile streaming movie application
Sprint	MapQuest Inc.	Mobile GPS-enabled mapping application
Sprint	RealNetworks, Inc.	Mobile version of Rhapsody Radio service
Sprint	WaveMarket & Microsoft	Mobile locator for enterprises to track their fleets and mobile workers
Sprint	Electronic Arts	Mobile versions of popular Electronic Arts games
Sprint	Yahoo!	Mobile e-mail service
Sprint	GE	Mobile real estate information application
Sprint	Yahoo!	Mobile version of Yahoo! Games multiplayer games
Sprint	AOL, MSN, and OZ Mobile	Mobile versions of AOL and MSN instant messaging services
T-Mobile	Research In Motion	Mobile access to Yahoo! e-mail through Blackberries

Sources*:* AT&T Press Release, *AT&T Wireless and Good Technology Deliver Broad Choice for Mobile Enterprises* (Dec. 12, 2006); AT&T Press Release, *AT&T Unveils PDA-Based Wireless GPS Navigation System with 3d Moving Maps* (Nov. 20, 2006); AT&T Press Release, *AT&T Wireless Customers Can Now Enjoy Music Content from Napster, Yahoo! Music, XM Satellite Radio and eMusic* (Nov. 2, 2006); AT&T Wireless Press Release, *AT&T Wireless Goes 'Out of the Box' With New Field Services Solutions Suite* (Nov. 1, 2006); AT&T Press Release, *Listen Up. AT&T Teams with Melodeo to Offer Mobile Podcasting* (Oct. 2, 2006); AT&T Press Release, *AT&T Introduces Good Technology's IBM Lotus Domino Solution to E-Mail Portfolio* (July 18, 2006); AT&T Press Release, *Ryder Teams with Teletrac and AT&T to Create "Smart" Trucks for Fleets of All Sizes* (July 5, 2006); AT&T Press Release, *Neopets.com Goes Mobile with Groundbreaking Web-to-Wireless Application, Exclusive Launch with AT&T Wireless* (June 27, 2006); AT&T Press Release, *AT&T Wireless' New MEdia Net NCAA March Madness Portal is the Exclusive Home for Official NCAA Tournament Video Highlights, News and Analysis on Your Wireless Phone* (Mar. 13, 2006); AT&T Press Release, *Watch This! AT&T Video Now Available* (Mar. 7, 2006); AT&T Press Release, *Yahoo! Go Mobile to Launch with AT&T, AT&T and Nokia* (Jan. 6, 2006); AT&T Press Release, *AT&T's MEdia Net Simplifies the Wireless Internet Experience by Providing Breakthrough Levels of Personalization for More Than 30 Million Customers and Introduces MEdia Net Live Ticker* (Nov. 17, 2005); AT&T Press Release, *AT&T and MobiTV Announce First Radio Service for the Nation's Largest Digital Voice and Data Network* (Nov. 14, 2005); AT&T Press Release, *AT&T Responds to Consumer Demand by Bringing New Mobile Messaging Services to the Masses* (Oct. 24, 2005); AT&T Press Release, *GeoLogic Solutions Gives Customers AT&T Wireless Digital Data Network Option for Expanded Coverage, Increased Data Capabilities* (Oct. 17, 2005); AT&T Press Release, *AT&T Wireless Selects Lucent Technologies' IMG-based Solution for Evolution to Next-Generation Services* (Oct. 17, 2005); AT&T Press Release, *RealNetworks to Launch Helix OnlineTV for Mobile Carriers with AT&T* (Sept. 28, 2005); AT&T Press Release, *AT&T and Sendia to Deliver One-Stop Wireless Solution for Salesforce* (Sept. 13, 2005); AT&T Press Release, *AT&T and BIO-key Introduce New Offer to Help Law Enforcement Stay Connected* (July 18, 2005); AT&T Press Release, *AT&T Captures the Moment With AOL's New Instant Pictures Feature for the AOL Instant Messenger (Aim) and Mobile You've Got Pictures Services* (Mar. 14, 2005); AT&T Press Release, *AT&T Goes Live with MobiTV* (Jan. 25, 2005); AT&T Press Release, *AT&T and Motricity Team to Enhance the Delivery of Mobile Content* (Feb. 14, 2005); Verizon Wireless Press Release, *TiVo Launches Remote Scheduling With Verizon Wireless* (Mar. 14, 2007); Verizon Wireless Press Release, *Verizon Wireless Lifts Curtain on V CAST Mobile TV; True Broadcast Quality, the Best of TV* (Jan. 7, 2007); Verizon Wireless Press Release, *Better Digital Music Experience Unveiled For V CAST Music* (Nov. 20, 2006); Verizon Wireless Press Release, *Packetvideo's pvPlayer Powering V CAST Music Receives CES Innovations 2007 Award* (Nov. 16, 2006); Verizon Wireless Press Release, *Powered by Networks In Motion, VZ Navigator Named CES Innovations 2007 Award Honoree* (Nov. 8, 2006); Verizon Wireless Press Release, *The Weather Channel Mobile Launches First Flash Lite Weather Application for Verizon Wireless Mobile Phones* (Oct. 25, 2006); Verizon Wireless Press Release, *Skyzone Entertainment Unveils Jungle Jim and Extreme Hangman Flash Lite Games On Verizon Wireless Get It Now Phones* (Oct. 25, 2006); Verizon Wireless Press Release, *Runners Can Easily Track, Store and Share Running Routes and Important Training Information While Listening To Music On Their Verizon Wireless Phones* (Sept. 27, 2006); Verizon Wireless Press Release, *Verizon Wireless Customers Can Now Personalize Their Mobile Phones With Sonic's ToneMaker DJ And Wallpaper Maker* (Sept. 13, 2006); Verizon Wireless Press Release, *Verizon Wireless Customers Can Quickly Find What They Want And Get Recommendations With Free Get It Now Search* (Sept. 13, 2006); Verizon Wireless Press Release, *FuelFinder Directs Verizon Wireless Customers To The Road To Savings* (May 17, 2006); Verizon Wireless Press Release, *The Sims Go Mobile: Verizon Wireless Customers Can Take EA's The Sims 2 On-The-Go* (Mar. 22, 2006); Verizon Wireless Press Release, *Verizon Wireless, TiVo Partner to Take TiVo to Mobile Phones* (Mar. 7, 2006); Verizon Wireless Press Release, *Immediate Access To Critical Patient Information Now Available From Verizon Wireless And MedAptus* (Feb. 10, 2006); Verizon Wireless Press Release, *PacketVideo Powers Verizon Wireless' V CAST Music, World's First Direct-to-Phone Music Service Using Microsoft Windows Media and DRM* (Jan. 6, 2006); Verizon Wireless Press Release, *Verizon Wireless Chooses Microsoft Windows Media to Power Its New V CAST Music Service* (Jan. 5, 2006); Verizon Wireless Press Release, *Verizon Wireless Introduces New Field Communications Solution for Enterprise Customers* (Nov. 17, 2005); Verizon Wireless Press Release, *New ZAGAT TO GO Restaurant/Entertainment Guide Now Available on Verizon Wireless Mobile Web 2.0* (Nov. 15, 2005); Verizon Wireless Press Release, *VOCEL and Prima Games Offer 'Strategy On The Go' Wireless Gaming Application to Verizon Wireless Mobile Web 2.0 Customers* (Nov. 15, 2005); Verizon Wireless Press Release, *GoComics and m-Qube Deliver Comics Daily to Verizon Wireless Mobile Web 2.0 Customers* (Nov. 15, 2005); Verizon Wireless Press Release, *OAG Offers Valuable New Travel Application on Verizon Wireless' Mobile Web 2.0 Service* (Nov. 15, 2005); Verizon Wireless Press Release, *Verizon Wireless Subscribers Can Now Get MobileGates' Map-Based*

Traffic, FuelFinder, and StoreFinder Applications on Their Mobile Phones (Nov. 15, 2005); Verizon Wireless Press Release, *Wireless Fortune Cookies and Pet-Pals Pet Albums From Cutlass Now Available on Verizon Wireless Mobile Web 2.0 Customers' Phones* (Nov. 15, 2005); Verizon Wireless Press Release, *Uclick Brings Favorite USA Today Sudoku Challenge To Verizon Wireless Get It Now-Enabled Phones* (Oct. 26, 2005); Verizon Wireless Press Release, *With the Power of Lucent Technologies, Verizon Wireless Extends Personalized Ringback Tone Service Throughout Nationwide Network* (Oct. 24, 2005); Verizon Wireless Press Release, *FUN Technologies' SkillJam Mobile Skill-Gaming Application, "SkillJam Arcade" Now Available to Verizon Wireless Get It Now Customers* (Oct. 21, 2005); Verizon Wireless Press Release, *Kayak Interactive Set to Deal Millions of Texas Hold'em Hands with Poker Superstars on Verizon Wireless' Get It Now Service* (Oct. 5, 2005); Verizon Wireless Press Release, *THQ's Destroy All Humans! Invades Verizon Wireless' Get It Now Service and Claims Mobile Game Domination* (Aug. 24, 2005); Verizon Wireless Press Release, *The Next Generation of Reaxion's Popular Minigolf Mobile Game Now on Verizon Wireless* (Aug. 17, 2005); Verizon Wireless Press Release, *Verizon Wireless Get It Now Customers Can Now Give Their Final Answer With "Who Wants To Be A Millionaire – 2005"* (Aug. 4, 2005); Verizon Wireless Press Release, *EA and Verizon Wireless Announce Publishing Relationship* (July 18, 2005); Verizon Wireless Press Release, *Rabble Lets Verizon Wireless Get It Now Customers Join The First Enhanced Mobile Blogging Network* (July 6, 2005); Verizon Wireless Press Release, *Glu Mobile Has a Hit with Zuma* (June 6, 2005); Verizon Wireless Press Release, *Timecard Provides Verizon Wireless Get It Now Customers Access To Timesheet And Job Tracking Information* (June 2, 2005); Verizon Wireless Press Release, *Verizon Wireless Customers Go Fishing With ESPN Bassmaster: Legendary Lunkers From Dwango Wireless* (June 2, 2005); Verizon Wireless Press Release, *"Hook, Line And Mobile" - IN-FUSIO Lures Verizon Wireless Get It Now Customers With New Fishtank Frenzy* (June 2, 2005); Verizon Wireless Press Release, *Gameloft's Midnight Pool Available On Get It Now Verizon Wireless Phones* (June 2, 2005); Verizon Wireless Press Release, *Bridgewater Systems Debuts Application Authorization Server; Facilitates Service Providers' Ability to Offer Advanced Application Services* (May 18, 2005); Verizon Wireless Press Release, *Vindigo Takes to the Diamond with Sporting News Fantasy Source for Verizon Wireless Customers* (May 17, 2005); Verizon Wireless Press Release, *Digital Chocolate Launches New 3D Mobile Game For Verizon Wireless V CAST Customers* (Apr. 26, 2005); Verizon Wireless Press Release, *JAMDAT Mobile Launches Tony Hawk's Pro Skater: 3D Mobile Edition On V CAST From Verizon Wireless* (Apr. 26, 2005); Verizon Wireless Press Release, *Infospace and First Star Software Bring New Mobile Game Boulder Dash Tournament for Prizes to Verizon Wireless Get It Now Customers* (Apr. 20, 2005); Verizon Wireless Press Release, *Eudora2go Soon Available on Get It Now From Verizon Wireless* (Mar. 15, 2005); Verizon Wireless Press Release, *Square Enix Brings Final Fantasy VII Snowboarding And Musashi Mobile Samurai 3D Titles To V CAST From Verizon Wireless* (Mar. 14, 2005); Verizon Wireless Press Release, *Verizon Wireless Get It Now Customers Can Find Year-Round, Action-Packed Football Play With Tecmo Bowl From Tecmo Mobile* (Mar. 9, 2005); Verizon Wireless Press Release, *Verizon Wireless and Callaway Golf Link Up Callaway Golf Mobile Caddie for Get It Now Customers* (Feb. 9, 2005); Verizon Wireless Press Release, *Windows Media Chosen by Verizon Wireless to Power V CAST, Nation's First 3G Wireless Broadband Multimedia Service* (Jan. 26, 2005); Sprint Press Release, *Sprint Certifies New GPS-Based School Bus Tracking Technology* (Jan. 11, 2007); Sprint Press Release, *Microsoft and Sprint Collaborate on Mobile Search* (Nov. 16, 2006); Sprint Press Release, *Sprint Nextel Teams With QUALCOMM and Lucent Technologies to Extend Industry-Leading Push-To-Talk Services with QUALCOMM'S QChat Solution* (Oct. 16, 2006); Sprint Press Release, *Sprint Power View Launches Today: Free, First-of-its-Kind, Made-for-Mobile Sports/Entertainment Programming Network* (Sept. 12, 2006); Sprint Press Release, *Sprint Nextel And Rave Wireless Introduce Innovative Mobile Solutions For College Campuses* (Aug. 21, 2006); Sprint Press Release, *Sprint and Smarter Agent Launch Location-Based Real Estate Application for Wireless Phones* (July 20, 2006); Sprint Press Release, *Get Your Game On in the Game Lobby From Sprint* (May 10, 2006); Sprint Press Release, *Sprint Family Locator Helps Give Parents Peace of Mind* (Apr. 13, 2006); Sprint Press Release, *Sprint and InfoSpace Introduce First Comprehensive Location-Based Search Product for Mobile Phones* (Mar. 28, 2006); Sprint Press Release, *Sprint Mobile Broadband and AP's SNAPfeed Technology Enable Broadcasters to Transmit Video of Breaking News* (Mar. 16, 2006); Sprint Press Release, *Sprint and Global Care Quest Introduce Mobile Access to Patient Data* (Feb. 13, 2006); Sprint Press Release, *NASCAR NEXTEL FanView Gives Fans a New Perspective* (Feb. 9, 2006); Sprint Press Release, *Sprint and Bones in Motion Launch Mobile Fitness Application* (Feb. 7, 2006); Sprint Press Release, *Sprint and MSpot Roll Out Red Carpet with Streaming Movie Service for Mobile Phones* (Dec. 12, 2005); Sprint Press Release, *"Mapquest Find Me" Now Available for Blackberry 7520 on the Nextel National Network* (Oct. 3, 2005); Sprint Press Release, *Sprint and RealNetworks Launch Rhapsody Radio* (Sept. 19, 2005); Sprint Press Release, *Sprint Precision Locator Helps Businesses Locate Fleets and Mobile Workers Through Their Wireless Device* (Aug. 23, 2005); Sprint Press Release, *Sprint Signs EA to Deliver Blockbuster Games* (July 18, 2005); Sprint Press Release, *Yahoo! and Sprint Launch Enhanced Mobile E-Mail*

Service (June 8, 2005); Sprint Press Release, *Sprint and GE Offer Unique Wireless Solution to Meet the Needs of REALTORS* (June 1, 2005); Sprint Press Release, *Yahoo! and Sprint Team to Offer Multiplayer PC-to-Mobile Games* (May 16, 2005); Sprint Press Release, *Sprint To Launch New Mobile Applications for the AOL Instant Messenger (AIM) and MSN Messenger Services* (Feb. 8, 2005); T-Mobile Press Release, *T-Mobile USA and RIM Launch the New BlackBerry 7105t and New BlackBerry Internet E-Mail Service for Yahoo! Mail Users* (Oct. 13, 2005).